INTERNATIONAL
HELLENIC
UNIVERSITY

Engineering of a Medical Record Information System

Chamizidis Efstathios

SID: 3301120010

SCHOOL OF SCIENCE & TECHNOLOGY

A thesis submitted for the degree of

Master of Science (MSc) in Information and Communication Systems

NOVEMBER 2013

THESSALONIKI – GREECE

Engineering of a Medical Record Information System

Chamizidis Efstathios

SID: 3301120010

Supervisor:	Prof. Ioannis Stamelos
Supervising Committee Members:	Assoc. Prof. Name Surname
	Assist. Prof. Name Surname

SCHOOL OF SCIENCE & TECHNOLOGY

A thesis submitted for the degree of

Master of Science (MSc) in Information and Communication Systems

NOVEMBER 2013

THESSALONIKI – GREECE

Abstract

This dissertation was written as a part of the MSc in ICT Systems at the International Hellenic University.

Open source applications are used in a wide variety of organizations nowadays. The development model of free license software is widely adopted by the industry. The diversity of the open source software systems raises the demands for quality software by the users. Quality can be achieved today with the use of quality assurance tools during the development. The question though is how an open source application that is created by the collaborative effort of several developers can meet certain quality criteria posed by such tools. To get an answer to that we partially developed the well-known in health sector OpenEMR software system for the needs of the Social Infirmary of the Thessaloniki and then tested it with the use of PHP_Depend quality assurance tool. The purpose is to find how a large open source program, with several lines of code written by different programmers, is behaving in terms of consistency, scalability and Object-Oriented structure. The results are encouraging showing that open source applications can be qualitative and worth to be considered when it comes to choose what software to use.

At this point I need to express my gratitude to the Associate Professor Ioannis Stamelos under whose guidance and supervision this thesis project was accomplished. Special thanks should be given to the GreekLUG community as well for their help and support with the installment of the OpenEMR in the Social Infirmary of Thessaloniki.

Chamizidis Efstathios

26/11/2013

Contents

1 Introduction

Open source software is developed, tested and continuously improved through public collaboration. The desire of users to choose open-source programs over proprietary ones is what empowers developers for even better results in terms of software systems. This thriving community collaboration led to development of programs even for the health care sector. OpenEMR is one of the most popular medical record programs than can be used with a free license. It is widely used across several countries having a strong support by its developing team.

The ability to use an EMR program free of charge is what makes OpenEMR even more popular. Being on a low budget Social Infirmary of Thessaloniki needed a medical record software system to keep records of the large numbers of patients being treated there. OpenEMR was the perfect choice and with the help of GreekLUG community it was up and running in the facilities of the Social Infirmary. Due to the peculiarities of the Greek pharmaceutical market though there was a need for developing the Dispensary module in a way that suited the needs of the Social Infirmary. A development team was assembled and developed a module that met the prerequisite needs. Once the development phase was over the module was engineered in order to fit precisely within the OpenEMR application.

Although everything run smoothly the adaptability of OpenEMR had some issues. Thus, in order to find whether OpenEMR meets certain quality criteria, we run PHP_Depend against the source code of OpenEMR. PHP_Depend is a Quality Assurance tool that shows through metrics how well structured a software system can be. The results were encouraging for open-source software, showing that they can play dominant role when it comes to choose new software systems.

The work described at the following chapters attempts to give a general overview in terms of QA assurance tools and how they can be used nowadays during the development of newer software. At the first chapter we have a brief presentation of the main aspects of OpenEMR, one of the most widespread open-source medical record programs. In the second chapter software quality is being discussed. How software

quality can be defined and what tools are available nowadays to verify it. Having chosen PHP_Depend in order to run it against OpenEMR source code an extended analysis of that is given. Into the next chapter there is our contribution to the project. How OpenEMR was installed and worked properly in the Social Infirmary of Thessaloniki. What was the functional evaluation we did on the software system and what was the feedback from those who interacted with the application. Quality evaluation follows, with the use of PEAR in order to install PHP_Depend within PHP and manage to run it and get the proper results either in larger XML files or in colorful charts. Summing up there is a chapter with the conclusions of this thesis and the future prospects that software systems have in terms of quality.

2 OpenEMR project – an open source application

A couple of years ago a non-profit organization, OEMR [1], was formed with a purpose to ensure that all people regardless of theirs economic situation, race or geographical location would have access to high quality medical care. The main idea was the development of free medical software that would be beneficial for people around the world. Since then OEMR supports the OpenEMR project [2] and uses the software produced to serve their purpose.

2.1 Meet OpenEMR (What exactly is OpenEMR)

OpenEMR is a Medical Record Information System. It is open source software that refers entirely to the health care sector. Its main use is to keep electronic medical records along with the ability of managing all the medical practices. Furthermore, patient scheduling, e-prescribing, medical electronic billing, patients demographics, patients portal, clinical decision support system are only some of the additional features that such an application offers [3].

As an open source application, OpenEMR is free. It was developed, tested and improved through public collaboration and that is why is supported by a dedicated and powerful community of developers. Either volunteers or professionals all of them share the same goal, which is making OpenEMR a superior alternative software solution compared to other proprietary software in the market.

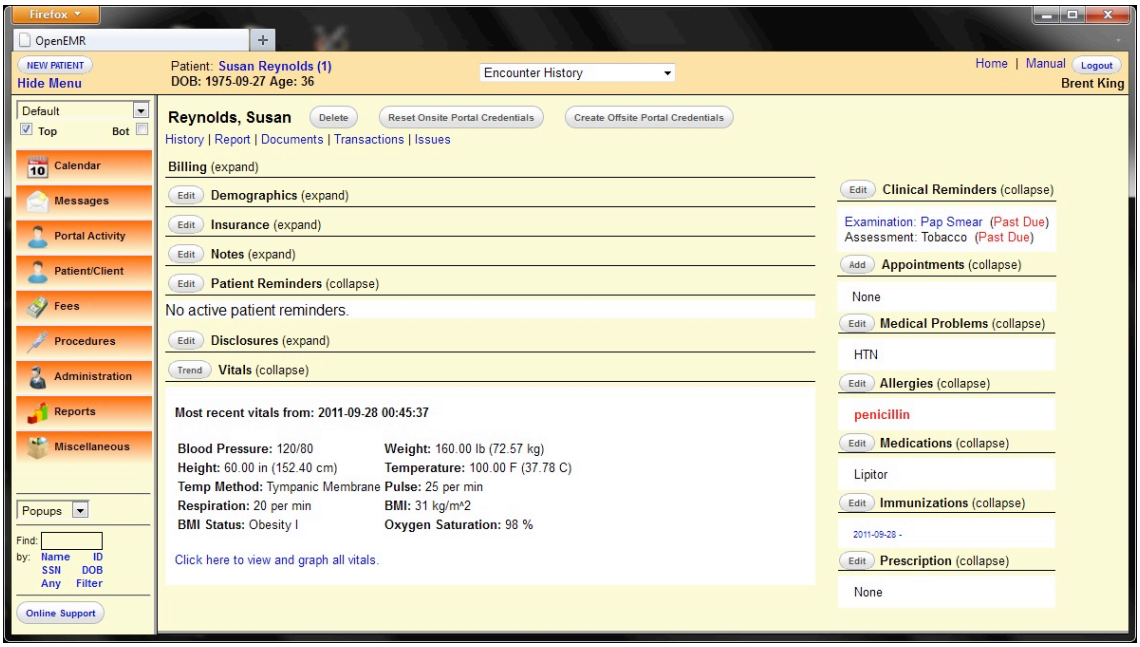
2.2 Features that OpenEMR supports

OpenEMR as an Information System offers a variety of features than can support from a single medical practitioner up to multiple clinic facilities in an efficient way. The features that can be supported by the software would be listed and briefly described within the following lines [4].

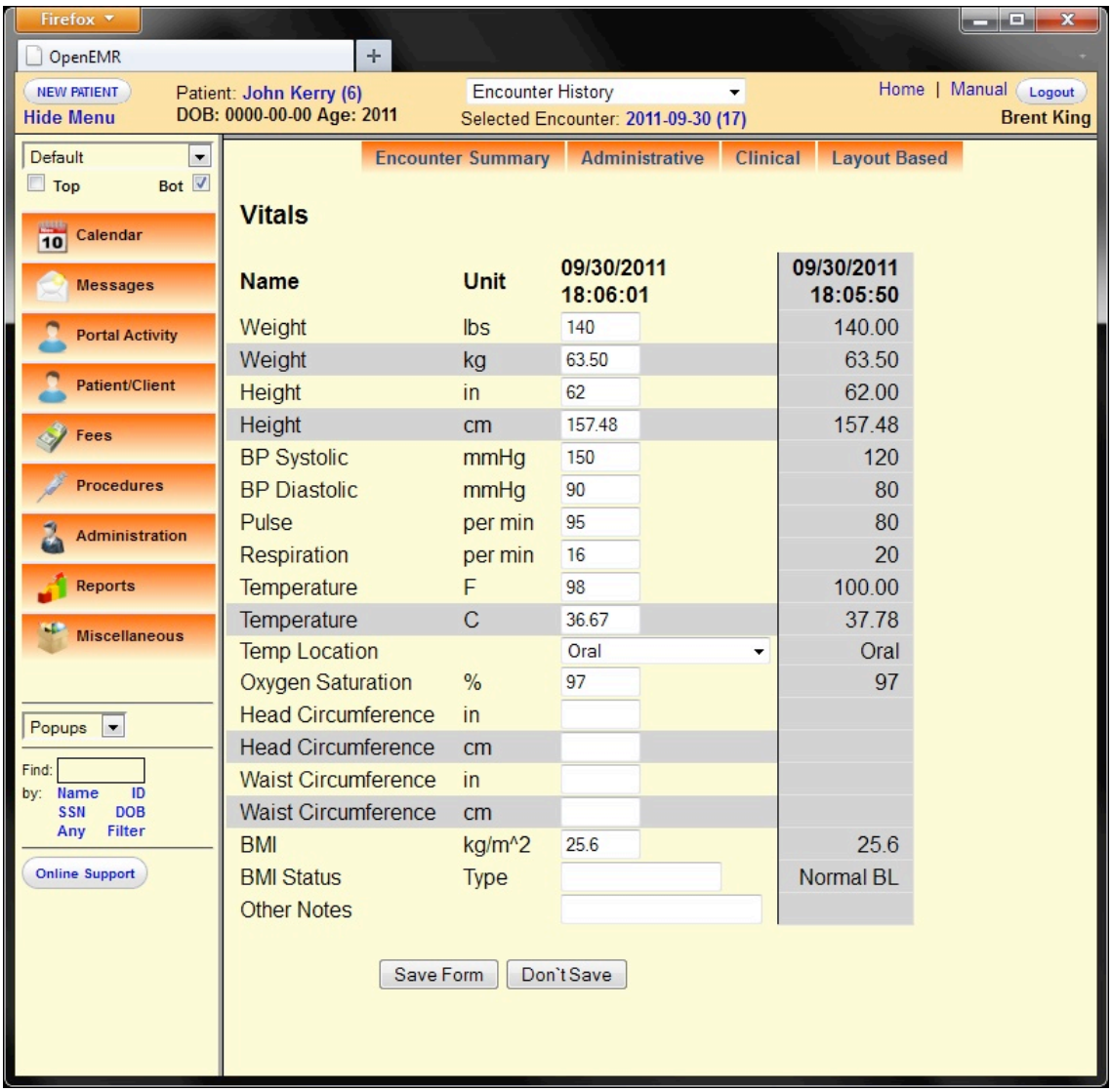
2.2.1 Electronic Medical Records

The electronic medical records include all the medical issues of a patient, along with his medication and immunization history as can be seen in Picture 1. Furthermore, all kind of forms and clinical notes are included such as vital charts, lab procedures and patient health reports as seen in Picture 2. All the above can be managed very easily throughout the system and even be connected with dated reminders or clinic messaging.

Tracking a patient's history that is stored in such an information system is a very easy and convenient way to check the complete background of a patient before making a diagnosis of an illness symptom or even before giving a new prescription that might have side effects.



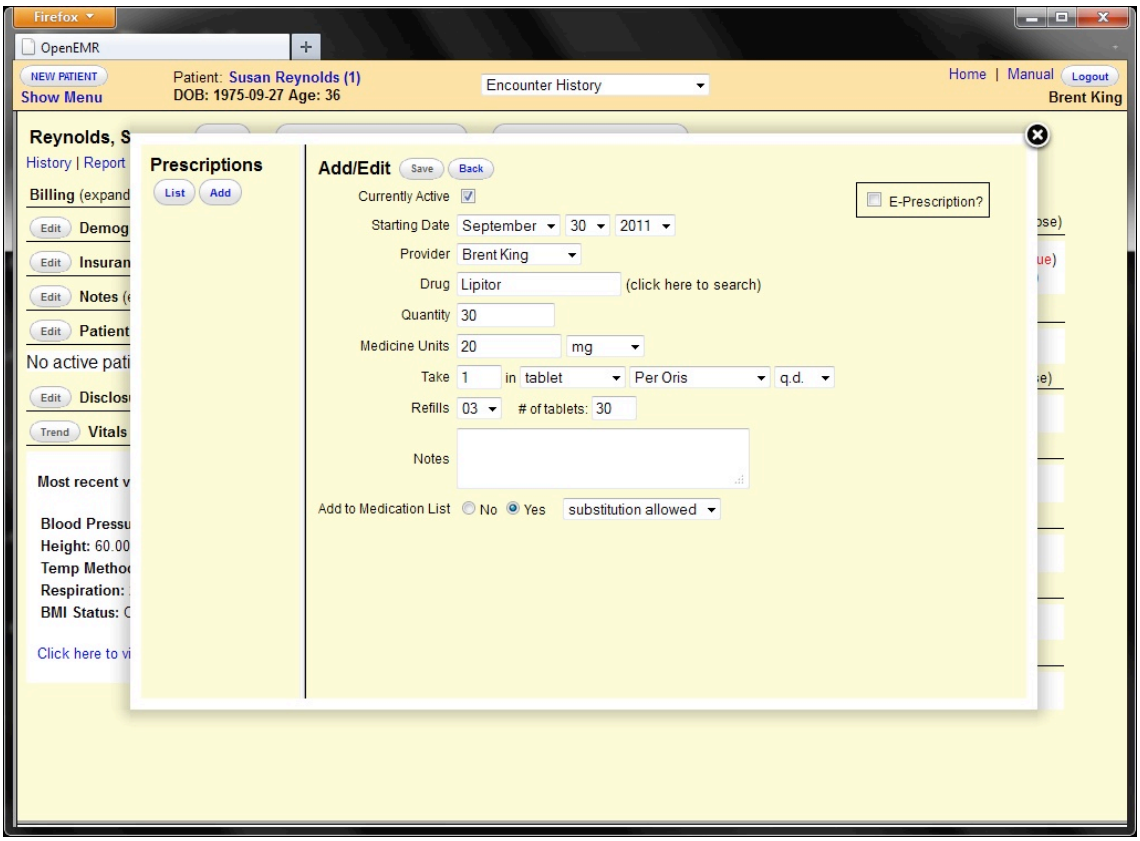
Picture 1: Patient's history record



Picture 2: Patient's clinical notes

2.2.2 e-Prescribing

In case of an illness usually certain medication is needed that is given by a physician or a medical doctor in the form of a prescription. With the use of OpenEMR an online drug search is possible that might be needed for such a prescription. In addition to that a doctor has access to patient's history prescriptions and medication. A doctor can create, print, fax or email a new prescription or use the e-prescribe feature seen in Picture 3 for countries which support such an application and have a national health database for their citizens. Furthermore for medical treatment centers there is the ability for in-house pharmacy dispensary support.



Picture 3: Prescription and e-prescription feature

2.2.3 Medical Electronic Billing

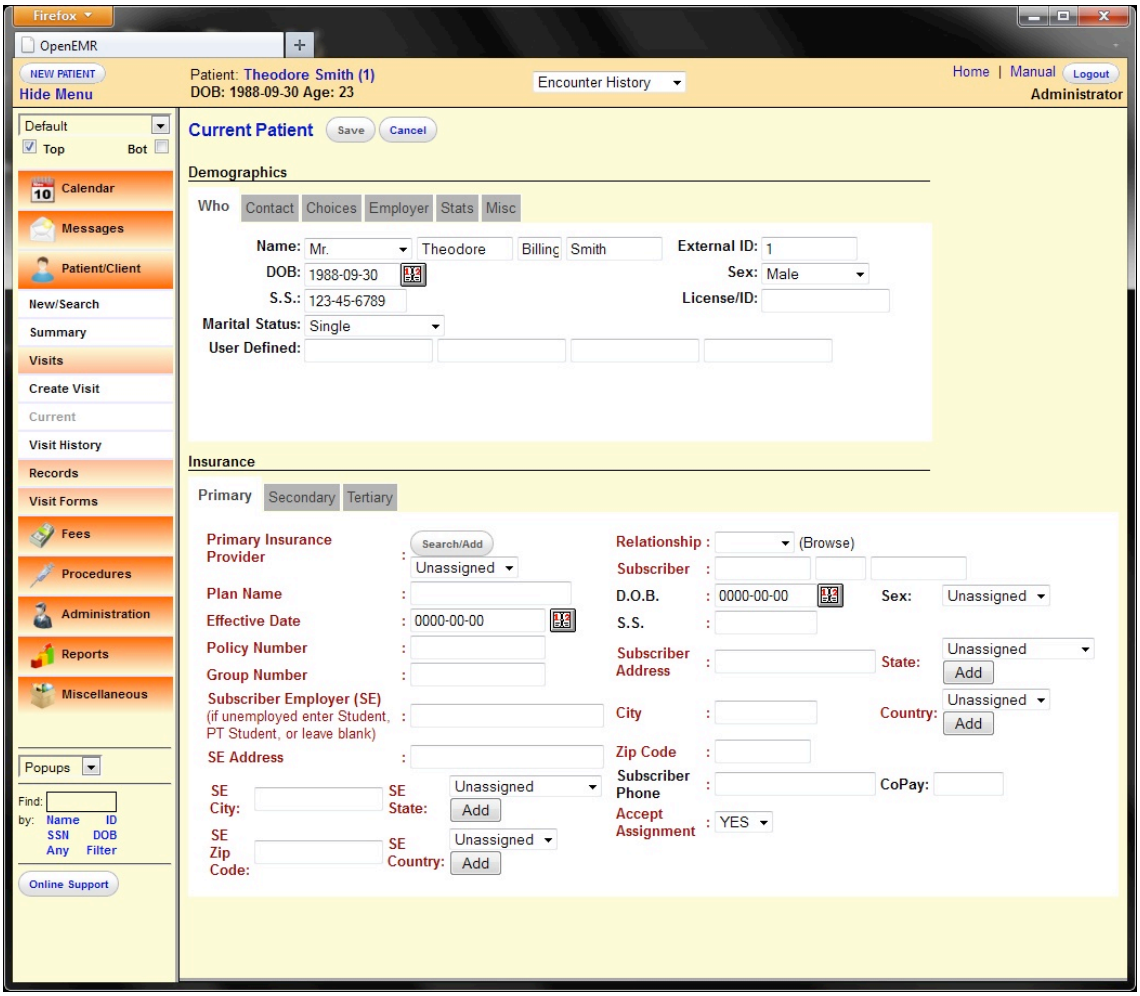
Billing issues can be resolved as well through OpenEMR. Especially for large medical clinics there is support for electronic billing or for paper claims that might be needed from insurances. Moreover one can do insurance eligibility queries or track the insurance history of a patient. All these can be done through a medical claim management interface which is very customizable according to the needs of every facility.

The main drawback though in this feature is that due to the different payment policies that are being followed all over the world across different countries the system might not be compatible with the local policy that is followed in each different country.

2.2.4 Patients' demographics

In an informational system such as OpenEMR when a patient is entered in the system a lot of information about him is being saved. Those are the patients demographics and have to do with the patient's primary information (such as name, date of birth, sex, identification card) and patient's additional information like marital status, contact information of patient and patient's employers, language and ethnicity, insurance cover-

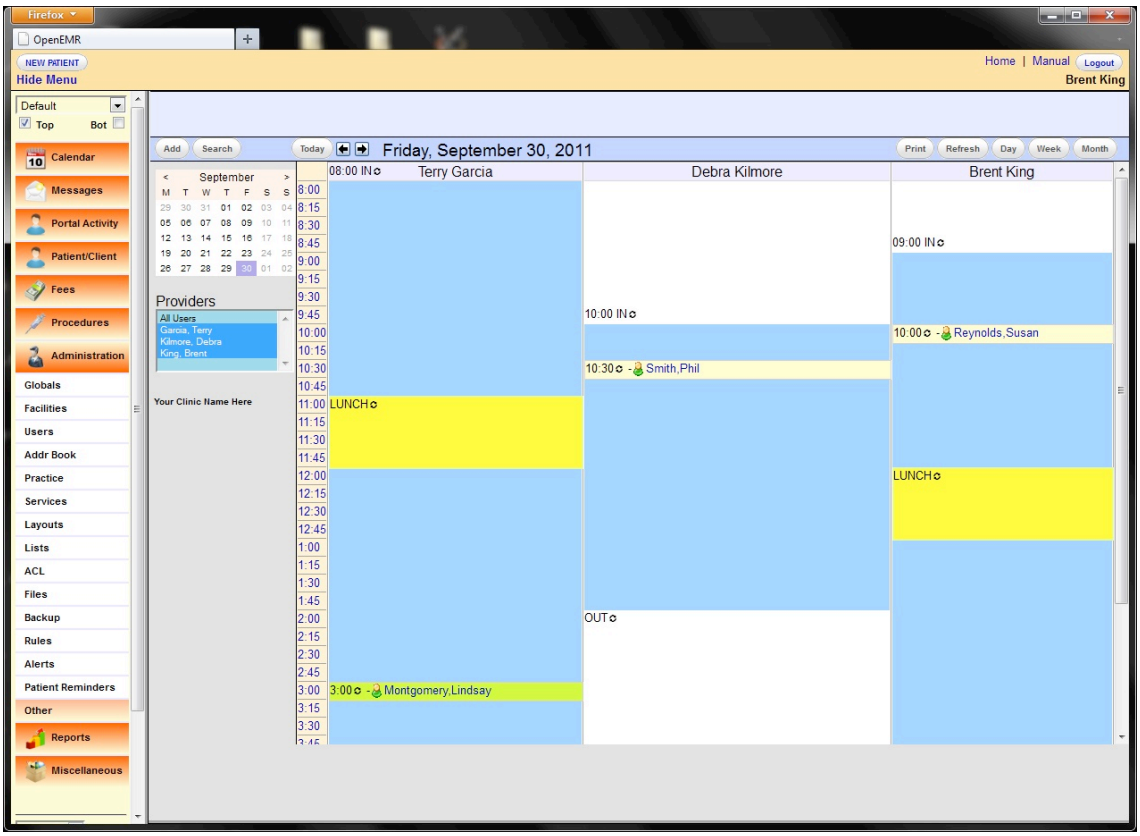
age, deceased tracking. All these and are included in a fully customizable profile that can be easily processed that is depicted in Picture 4 below, so through patients' demographics useful conclusions can be extracted for those that might be interested.



Picture 4: Patients' demographics

2.2.5 Patient Scheduling

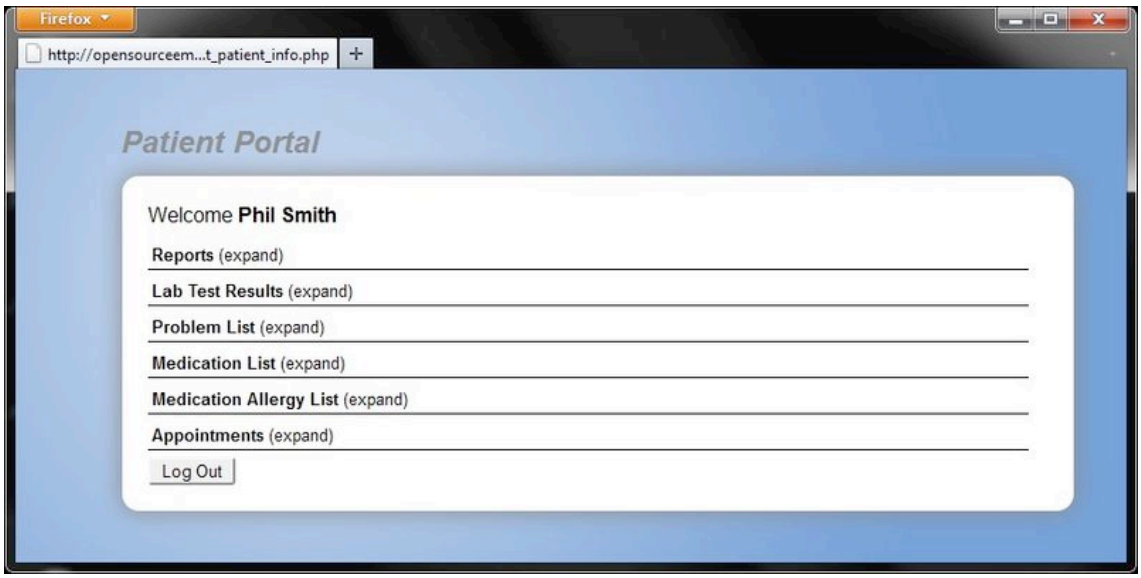
Setting an appointment is what patient scheduling (Picture 5) is used for. It can support either multiple facilities if it's used in a medical treatment center or a single appointment that a physician can insert into the system. What extends its usage is the ability to send an appointment notification either via an email or via an sms to the patient. The insertion can be done in a flexible appointment calendar where certain features are included such as: find open appointment slots, categories for appointment types, colors associated with appointment types and facilities, repeated appointments.



Picture 5: Patients' scheduling

2.2.6 Patients Portal

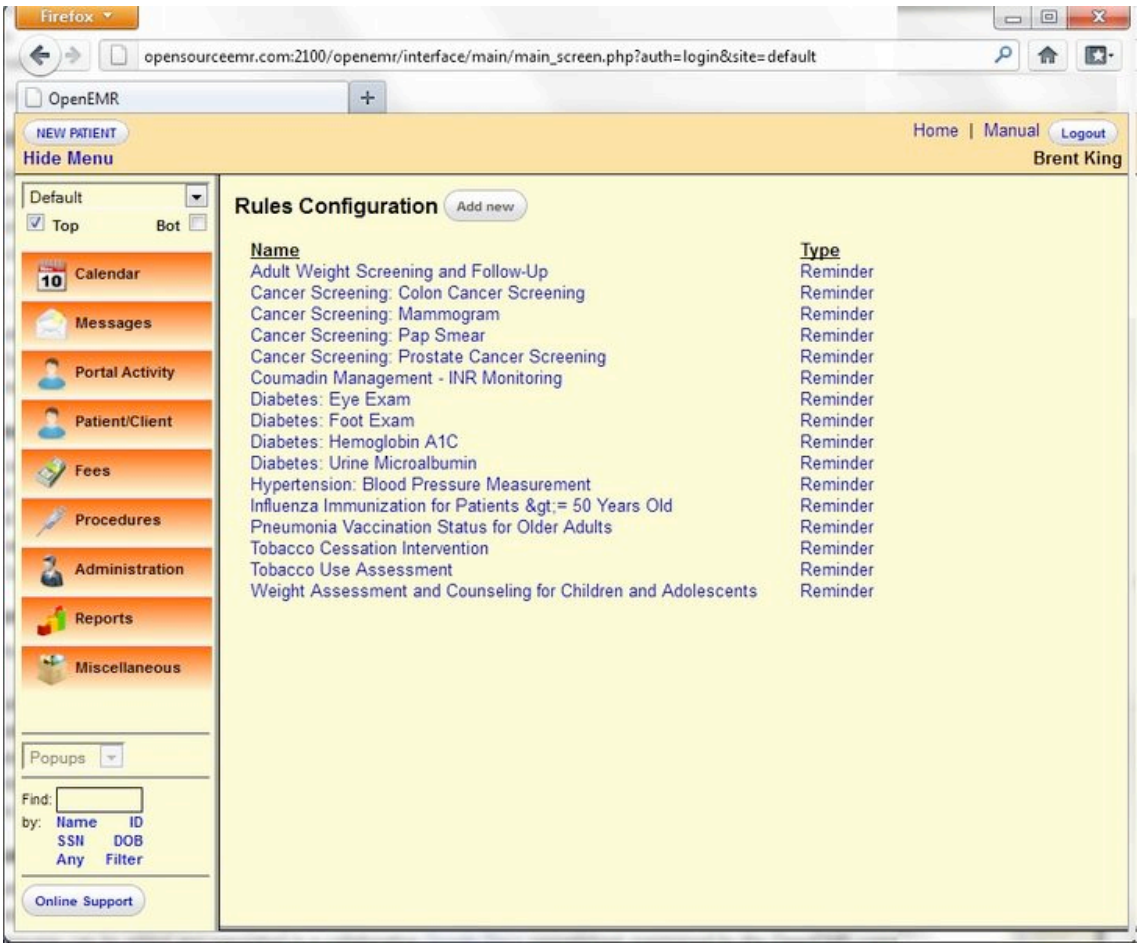
OpenEMR has the ability to set up a patient portal. There are two options for such a set-up, either through a functional Patient Portal which is included with OpenEMR or with the use of a third party patient portal which utilizes a setoff APIs included within OpenEMR. In either way the patient has the ability to access his personal health reports, the results of his lab tests, his medical problem history along with his medications and allergies that might have. In case of a medical clinic a patient can have access to check his appointments as well. All these through a secure API that support as well third party patient Portals as mentioned above.



Picture 6: Patients' portal

2.2.7 Clinical Decision Support System

A Clinical Decision Support System is used to provide physicians, medical doctors or even clinicians with knowledge about person-specific information which are intelligently filtered and presented at the appropriate time, so as to enhance health care benefits. Decision support systems use various tools which enhance the decision making in the clinical workflow. These tools take into consideration patient data reports, condition specific order sets, and documentation templates so as to output a statement, which by the criteria given will trigger a notification alert or an action. Many different outcomes can be produced if the criteria given are changed. In OpenEMR with the use of CDS we have Physician Reminders, Patient Reminders, Clinical Quality Measure Calculations, and Automated meaningful use measurement calculations in a fully customizable and flexible interface where the user can create his own rules for certain criteria.



Picture 7: Clinical Decision Rules

2.3 What is OpenEMR's main advantage?

The main advantage of OpenEMR as an open-source project is that it has its source code published and made freely available to the public. It allows anyone to download it free of charge, upgrade it, copy it and modify it and in the end even redistribute the newly produced source code without paying any type of royalties or fees to the OEMR foundation. Due to the fact that it is based on open source code it evolves through community cooperation and collaboration. A thriving community that OpenEMR's supporters boast about. One can get free support through the community which is composed of individual users, programmers and even companies which contributed to the project. The source code of the project is improved in daily basis and everyday downloads make it the most popular free electronic medical records software.

The community is dedicated into guarding OpenEMR's free status. Furthermore there is tremendous online documentation that comes along with the project and multiple channels of communication within members of the community via wikis, forums,

Twitter and Facebook. It should be mentioned that it is certified by the National Coordinator for Health Information technology in the US [5] and recently it was listed as one of the best open source applications by InfoWorld (Bossie Awards 2013) [6]. The collaboration of resources led to the creation of efficient software such as OpenEMR, on the contrary with proprietary companies which compete against each other and waste valuable amount of resources and manpower.

2.4 Where and why OpenEMR can apply

OpenEMR refers to those who are involved into the health care system. Individual medical doctors, lone therapists, small private clinics and even large scale hospitals can all benefit from the use of the excessive features that OpenEMR has to offer. The configuration options are practically endless and it can be suited easily to the needs of everyone that would like to acquire and use it.

The nature of open source software allows users to have access the software for free, have complete control over the software, be able to control their data and get support from different individuals. That is exactly what OpenEMR provides and the reason for someone to embrace it and use it. It is extremely important for a doctor to have the control and ownership of his patients' data. To be able to access his data securely from anywhere and hire his own personnel to make software changes according to his needs or even make it on his own. There is no need for vendor proprietary software anymore which come with huge terms of agreement and demands a respectful amount of money in monthly basis for support and upgrades. Reduction of costs, ease of use and unlimited community support are enough to convince that OpenEMR has lot to offer and demands nothing in return.

3 PHP Software Quality Assurance Tools

In this chapter we will discuss about software quality in PHP projects and what is that "key" factor that defines "software quality". The development of an application is an ongoing procedure during which then main issue is to produce the best possible quality outcome. But in order to reach a certifiable goal firstly it should be clearly defined. Usually it is easier to be defined what "best possible quality" is not. So then, one can count the metric distance for various different characteristics that comprise the software quality and compare it with what is defined as "bad practice" in software development. It should be mentioned that all of these characteristics are not equally important for the user and the developer of the software. A user's view on quality always differentiates from a developer's view, cause a user focus on aspects of quality that are tangible for them though a developer focus on the source code that should be understandable, adaptable and scalable.

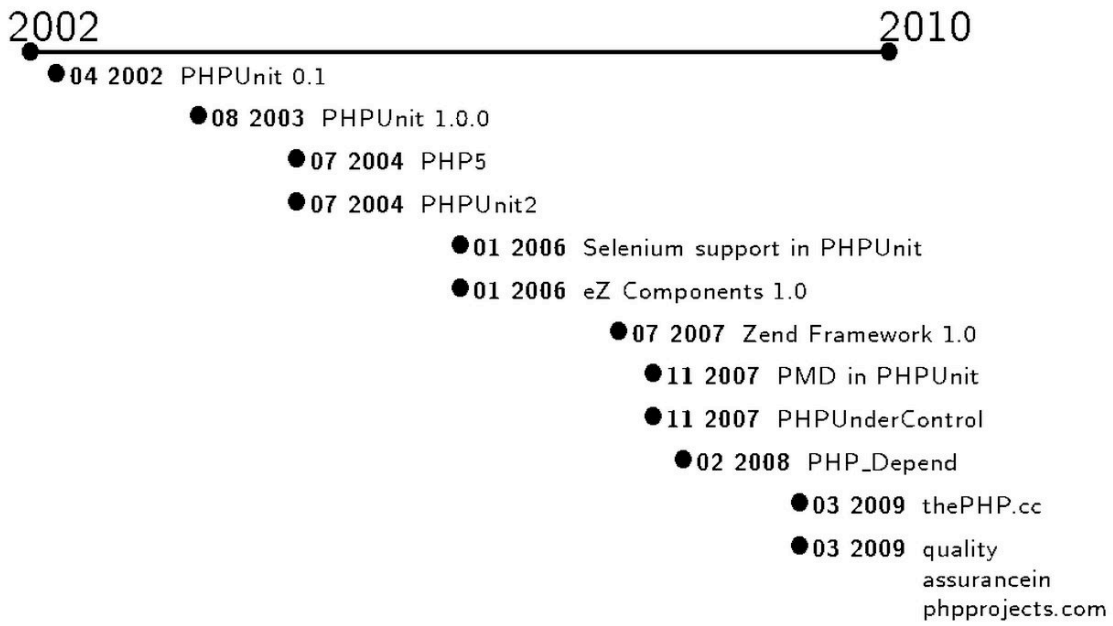
The quality aspects such as functionality, usability, reactivity, security, availability and reliability are those that a user can understand and experience during the usage of a software application. These quality aspects define external quality.

The internal quality of software cannot be easily apprehended by the end users. It has to do with the proper and structured implementation of the code by the developers, in order to be able to accept future change requests by the users without any unexpected side effects to the whole software structure [7].

3.1 PHP Tools that verify code quality

Software quality has many aspects as it was previously mentioned, thus the tools that PHP developers have in their disposal to measure and improve software quality are equally many. In this chapter follows a brief presentation of the latest PHP Quality Assurance tools [8] that are being used by developers in order to improve software quality and make development process faster.

As an outline for sake of completeness in Picture 8 one can see the historical view of the PHP Quality Assurance tools as well as their development in time.



Picture 8: PHP Quality Assurance tools milestones [9]

PHPUnit

PHPUnit is the prominent tool for unit testing in PHP projects. Using the unit testing method [10] allows individuals units of source code to be tested and determines if they are fit for use. It is widely known because it provides a framework that helps developers with the creation of unit tests and at the same time offers great functionality in executing tests and analyzing their results.

PHPLOC

PHPloc is a tool for measuring the size of a PHP project with the use of the lines of code (LOC) software metric. It is used in order to calculate quickly the size of a PHP project and analyze its structure.

PHP Copy/Paste Detector

The PHP Copy-Paste Detector (phpcpd) searches a PHP project for duplicated code. Usually it is used for an automated search in large scale projects where we have continuous integration of code.

PHP Dead Code Detector

The PHP Dead Code Detector (phpdcd) scans a PHP project for code that is not called anymore and thus potentially can be deleted.

PHP_Depend

PHP_Depend (pdepend) is a tool that can create various sets of software metrics from a given source code base. These values can be used for static code analysis which means they are used to measure the quality of the given code and thus help developers to identify parts of an application where a code refactoring should be applied.

PHP Mess Detector

The PHP Mess Detector (phpmd) is based on PHP_Depend. It uses PHP_Depend to scan PHP source code for software metrics and then it allows the definition of rules that operate on the "raw data" software metrics that PHP_Depend has calculated. Usually it searches for potential problems in the code given such as bugs, dead code, suboptimal code, and overcomplicated expressions.

PHP_CodeSniffer

The PHP_CodeSniffer (phpcs) is an essential development tool that ensures code cohesion and consistency. It is the most common tool used across the developers. What it actually does is that it tokenizes PHP, JavaScript and CSS files and detects potential violations of a defined set of coding standards. With the use of CodeSniffer through its countless sniffs possible defects and performance problems that may occur can be identified.

bytekit-cli

bytekit-cli is a command-line front-end tool that leverages the Bytekit PHP extension for code introspection analysis at bytecode level. This way is possible to find code that generates output for a code review.

PHP_CodeBrowser

The PHP_CodeBrowser (phpcb) is a report generator which takes the output of other tools as input and generates a unified report which is extremely helpful in continuous code integration. Actually it provides code browsing for PHP files with syntax high-lighting and colored error-sections found by other quality assurance tools such as PHPUnit, PHP Mess Detector and PHP_CodeSniffer.

vfsStream

vfsStream is a PHP stream wrapper for a virtual file system that might be helpful in unit tests in order to mock the real file system. Usually it is used with a unit test framework like PHPUnit.

Behat

Behat is a tool that uses behavior-driven development software process (BDD). With the use of Behat one can write human readable stories that describe the behavior of an application and test them against that application.

Jenkis PHP

Jenkins is the leading open-source framework [11] solution for continuous integration. It monitors the execution of repeated jobs such as building a software project. Due to its plugin ecosystem Jenkins makes it easier for the developers to integrate changes in their projects. Jenkins can support building and testing virtually any project of any size. The original name of Jenkins was Hudson.

3.2 PHP_Depend

The amount of Quality Assurance tools in PHP is vast and each one of them addresses either different issues that might occur while programming or even the same ones from different scope. QA tools in PHP are functional either on their own as individuals implemented in the code of the projects or under the hood of programs that use unit testing method in order to unify all these tools, make the reading of the results easier and over all save time from developers while programming.

For the purposes of this dissertation it was decided to evaluate the code of OpenEMR open-source program and the newly installed dispensary module with the use of PHP_Depend. One of the newest quality assurance tools that can found doing static code analysis independantly of the size of the given project.

3.2.1 What is PHP_Depend?

A question that occurs directly in mind is "What exactly is PHP_Depend?" The answer is fairly simple. PHP_Depend is a PHP software metrics tool as it was mentioned above in the brief presentation of quality tools. But then again the follow-up question is "What exactly are these software metrics?" The above inquiries will be answered in the paragraphs following in order to give an overall idea of what exactly PHP_Depend and "software metrics" are.

PHP_Depend [12] is lightweight software that performs static code analysis on a given source code base. In order to do this PHP_Depend takes the source code and generates an internal data structure which is easily processable. This data structure is called AST (Abstract Syntax Tree) [13] representing the various judgments and elements used in the source code of the project discussed. PHP_Depend measures and reports the values of software metrics that represent different aspects of software quality. It actually generates reports which are the result of the measurement process: 1) Overview Pyramid (OP) [14], which brings together heritage inherent measurements, coupling, size and complexity, 2) Abstraction Instability Chart (AI) [15], which establishing a relationship between the abstract and the stability of each of the packets of the project.

The so called "software metrics" are just the sum of statements or code fragments that found in the analyzed given source code. One of the methods used in PHP_Depend is Cyclomatic Complexity for methods/classes. It is software metric that indicates the complexity of a program by measuring directly the number of linearly independent paths through a program's source code. Software metrics as they are calculated by PHP_Depend help developers to identify parts of an application where a code refactoring should be applied.

3.2.2 Why should such a tool be used?

Every tool used in a real programming development should justify its usefulness. PHP_Depend does that with flying colors.

It can be used in an automated build environment such as PHPUnit or Jenkis. The generated reports produced are always objective, measuring only the quality facts of a given source code. In addition to that it's scalable and easily adjustable with growing source code integration. It allows the identification of suspect parts of code in the software system that should be part of a code review, without looking into the source code. To sum up, it also supports some high quality metrics that can be very useful, once someone is familiar with certain level of metrics knowledge.

In simple words in an everyday use PHP_Depend provides potential optimization: 1) if for example a function is too long or has too many parameters, 2) If the variable names in a function are too long or too short 3) if there are many nested cycles. Furthermore it checks if there is use of eval() function which is very dangerous, if there is name consistency in the source code and whether unused methods or variables are included in the source code. For all those reasons mentioned above PHP_Depend is one of the most frequently used Quality Assurance tool that is used by the majority of developers.

3.2.3 Software metrics that can be extracted with a PHP_Depend

PHP Depend as a Quality Assurance tool generates a large set of software metrics from a given code base. The full list of calculated metrics by PHP_Depend is quite extensive and they can be found in PHP_Depend's online documentation.

In the Picture 9 following there is a brief synopsis of the software metrics generated by PHP Depend. Next to each metric there is a short description which tries to give an explanation on how to interpret each metric in the context of an application's source code.

Metric	Description	Project	Package	File	Class	Method
ahh	*Average Hierarchy Height* The average of the maximum lenght from a root class to ist deepest subclass subclass	X				
andc	*Average Number of Derived Classes* The average of direct subclasses of a class	X				
ca	Afferent Coupling Number of unique incoming dependencies from other artifacts of the same type.				X	
calls	*Number of Method or Function Calls*	X				
cbo	Coupling Between Objects Number of unique outgoing dependencies to other artifacts of the same type.				X	
ccn	Cyclomatic Complexity Number	X				X
ccn2	Extended Cyclomatic Complexity Number	X				X
ce	Efferent Coupling Number of unique outgoing dependencies to other artifacts of the same type.				X	
cis	Class Interface Size Number of non private methods and properties of a class: **CIS = public(NOM + VARS)** Measures the size of the interface from other parts of the system to a class.				X	
cloc	*Comment Lines fo Code*	X		X	X	X
clsa	*Number of Abstract Classes*	X				
clsc	*Number of Concrete Classes*	X				
cr	*Code Rank* Google PageRank applied on Packages and Classes. Classes with a high value should be tested frequently.		X		X	

Picture 9: Software metrics generated by PHP_Depend

Metric	Description	Project	Package	File	Class	Method
csz	Class Size Number of methods and properties of a class: CSZ = NOM + VARS Measures the size of a class concerning operations and data.				X	
dit	*Depth of Inheritance Tree* Depth of inheritance to root class				X	
eloc	*Executable Lines of Code*	X		X	X	X
fanout	*Number of Fanouts* Referenced Classes	X				
leafs	*Number of Leaf Classes* (finla) classes	X				
lloc	*Logical Lines Of Code*	X		X	X	X
loc	*Lines Of Code*	X		X	X	X
maxDIT	*Max Depth of Inheritance Tree* Maximum depth of inheritance	X				
noam	*Number Of Added Methods*				X	
nocc	*Number Of Child Classes*				X	
noom	*Number Of Overwritten Methods*				X	
ncloc	*Non Comment Lines Of Code*	X		X	X	X
noc	*Number Of Classes*	X	X			
nof	*Number Of Functions*	X	X			
noi	*Number Of Interfaces*	X	X			
nom	*Number Of Methods*	X	X		X	
npm	Number of Public Methods				X	
npath	*NPath Complexity*					X

Picture 9: Software metrics generated by PHP_Depend

Metric	Description	Project	Package	File	Class	Method
nop	*Number of Packages*	X				
rcr	*Reverse Code Rank*		X		X	
roots	*Number of Root Classes*	X				
vars	*Properties*				X	
varsi	*Inherited Properties*				X	
varsnp	*Non Private Properties*				X	
wmc	Weighted Method Count The WMC metric is the sum of the complexities of all declared methods and constructors of class.				X	
wmci	*Inherited Weighted Method Count* Same as wmc, but only inherited methods.				X	
wmcnp	*Non Private Weighted Method Count* Same as wmc, but only non private methods.				X	

Picture 9: Software metrics generated by PHP_Depend

4 Evaluation

Having OpenEMR's source code as a base in order to run PHP_Depend quality tool clearly poses questions about the results. Before the quality evaluation though, several steps had to take place regarding OpenEMR so as to run smoothly for the Social Infirmary of Thessaloniki.

4.1 Functional Evaluation

4.1.1 Social Infirmary of Thessaloniki & OpenEMR

During the last few years and due to the economic crisis situation more and more people in Greece are led to unemployment and poverty being unable to support even their most basic everyday needs. Furthermore, being struck by the restrictive fiscal policy of the government which seems unable to support the needs of its citizens even in a crucial sector such as health, a large number of citizens seem to have abolished their essential right for free health care. This new unfair and brutal social condition that affected a lot of people, led the health professionals to an initiative that was warmly embraced by volunteers, unions and even the authorities. The initiative has as its main goal the necessity of a social infirmary for people that are not having health care insurance.

Based on this initiative, the Social Infirmary of Thessaloniki [16] started operating since November of 2011 on a daily basis during weekdays. Any uninsured Greek or immigrant citizen can seek for treatment there completely free of charge in several medical clinics such as general medicine, neurological, pediatric, psychiatric, psychological support, dentist and pharmacy.

The purpose of the Social Infirmary is to provide primary care and health care to those who are official discarded outside the National Health System because they are asked to pay the entire cost of treatment and examination. At the same time the Social Infirmary works on completely voluntarily manner being supported by those who want to offer to their fellow human beings. Being settled in a building offered by the Labor Centre of Thessaloniki a large mesh of specialized health doctors, practitioners and single individuals spare their free time to offer for the commonweal.

Due to the fact that the income for the Social Infirmary is limited and mostly based on donations of money, equipment or medicine from supporters, those participating in its structural organization decided to use OpenEMR as the medical record information system. The system was chosen because as was aforementioned in the first chapter it is a widespread open source application capable to run and keep medical records of the patients being treated in different clinics within the Social infirmary.

The implementation and the initial setup of the application on the server has been done by members of the GreekLUG community, who to this day still offer their support to the Social Infirmary of Thessaloniki on issues such as network troubleshooting, server maintenance and OpenEMR upgrades. The GreekLUG [17] is a Non-Government Organization which purpose is to promote open source software and spread the word about the freedom of choice on software that anyone using computers can and should have.

Even though OpenEMR is a program that refers to medical care sector worldwide it still needs some fine tuning in order to get the most out of it from country to country. Because of the difference between laws and regulations within different countries sometimes alternations needed within the code in order to make it more suitable for each specific user. That is one of the main assets of open source software, the ability to have access to the code and customize the application depending on the user's need.

During the implementation in the Social Infirmary of Thessaloniki the application run smoothly but there was a need for development in the Dispensary Module which accommodates the medicine that being stored in an apothecary. Due to the oddity of the situation the pharmacy of the social infirmary has three different storage spaces where medicine are gathered, checked if they have expired or not and stored or discarded. Furthermore the list of the drugs that are allowed being in circulation in Greece is different across other countries. The interface needed to be as simple as possible because the potential users are volunteers that are not familiar with such applications. Their needs and opinion were taken into consideration during the coding trying to simplify what they are doing up to now on papers or accounting sheets.

A team consisted of volunteers undergraduate students from Aristotle University of Thessaloniki was assembled under the guidance and supervision of Associate Professor Ioannis Stamelos in order to complete the project of the dispensary module being modi-

fied for the needs of the Social infirmary of Thessaloniki. The technologies used to build the module are HTML, PHP and AJAX along with MySQL running on an Apache server. The results were astonishing and after a lot of hard working hours the module was able to work as intended. The dispensary module is now working as an add-on within OpenEMR. The implementation has been done with the use of an extra button in the interface of the application which once pressed it calls the module to run without interfering with the rest of the application.

4.1.2 OpenEMR's development

The next step that followed the original design of the module was its functional evaluation. Having the files the module needed in order to operate it was firstly installed on the server hosting OpenEMR in the Social Infirmary of Thessaloniki. The upcoming issue that had to be solved was the communication between the computers in the storage units which are in a different location from the main pharmacy which is located within the Social Infirmary. OpenEMR as it was aforementioned is a web interface application which makes it very easy to have access on it through distance from any other machine that has a web browser. All that one need is the URL to the main server that the application is installed. Due to limited resources though, there was no internet connection with Static IP that would serve better the purposes of the OpenEMR server side. In order to run the server on top of a dynamic ADSL connection a service such as DynDNS [18] was used so as to give to the connection a name that everyone could consistently use. In that way, those who want to connect to the server do not need to know the current IP address of the server but they use the specific URL that has been assigned by the DynDNS service.

Once everything was settled, typing in the address bar the following URL http://kiathess.dlinkddns.com/ leads to the main page hosted on the server and allows access to the OpenEMR application as can be seen in Picture 10 following that has been set for the Social Infirmary of Thessaloniki.

Having solved the logging process through distance the upcoming major issue was the integration of the module into the application. This process needed to replace the original dispensary module that did not fit the needs of the Greek Social Infirmary with the newly developed in a way that it would seem and feel like a part of the original ap-

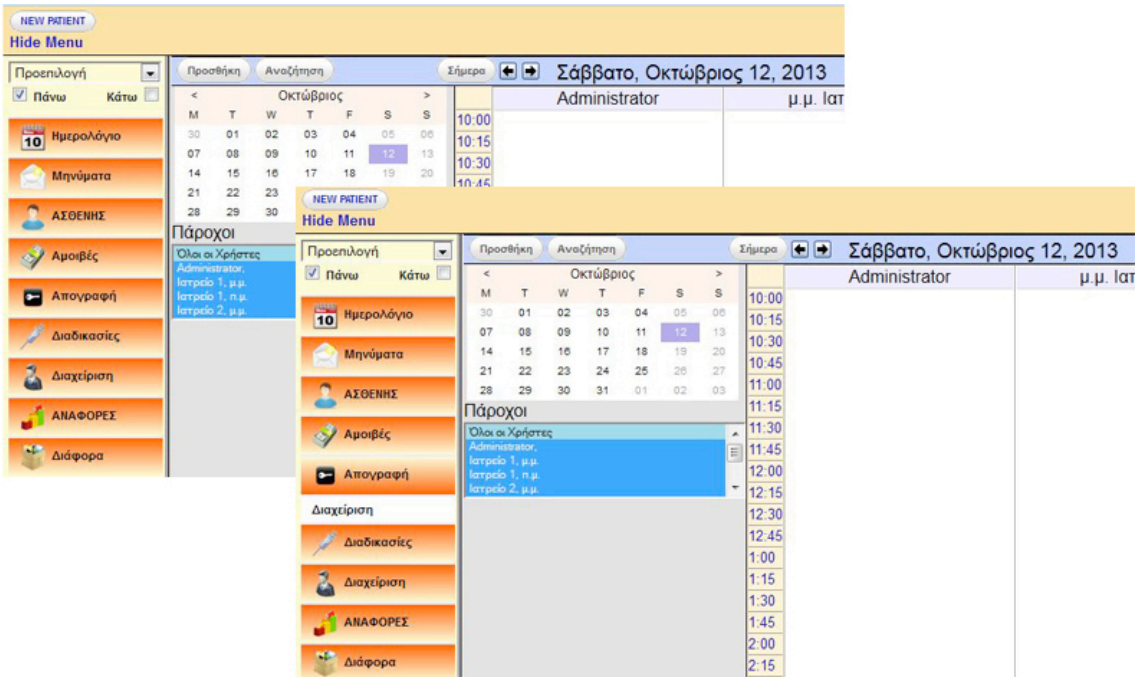
plication. But due to major differences in the development a lot of things such as renaming or swapping integers, fixing the source code, checking and cross-checking links be-

Picture 10: Accessing OpenEMR's server through distance

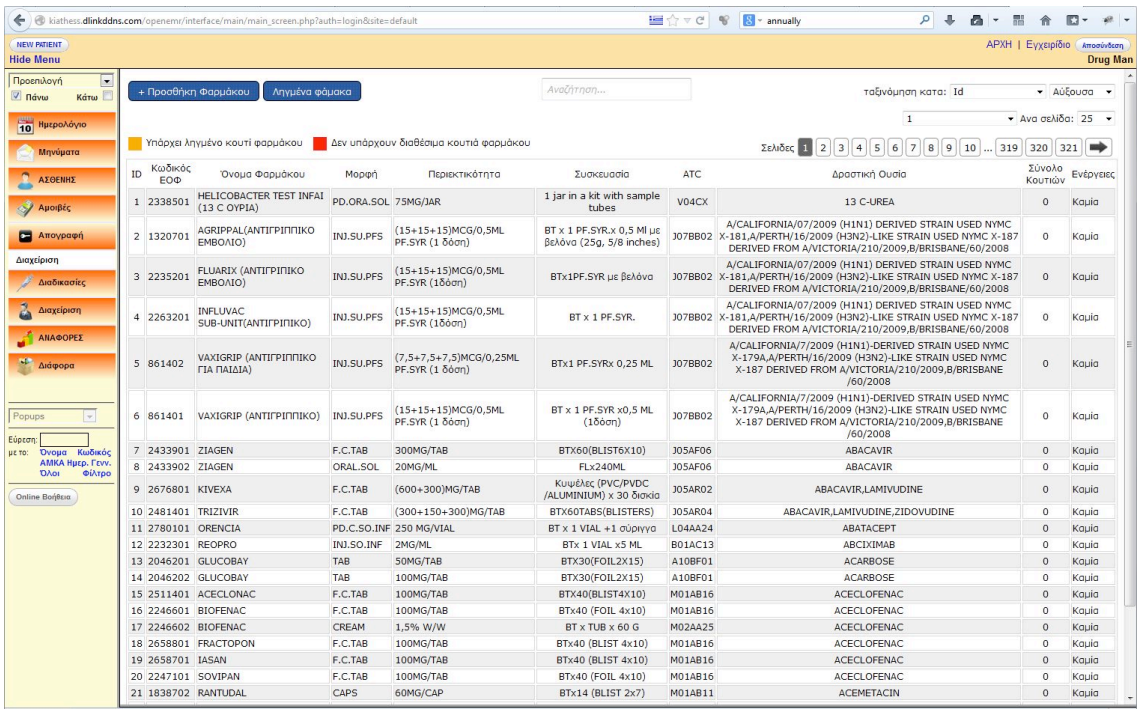
tween different files and sections of the main OpenEMR caused a situation that needed enough time of troubleshooting in order to achieve the desired result.

The main concern was the module to be fully embedded into the application. The aim was to stick in such a way that we would be able to create a user who would have access only into the pharmacy section and not in any of the patients' files, such as their demographics and medical history. This is something that the original module offered but we wanted to be sure that the newly installed module would take its place without changing anything of the usability that the access lists and owners' rights offer to the administrator of the OpenEMR. After all, when the module seemed to fit perfectly within the application a new problem came up. The main tree structure of the left navigation menu of the application did not work as intended. Either by expanding all submenus or without allowing the execution of several http links, left navigation menu placed a severe downtime period during the thesis project. This led to many hours investigating what caused such a bug when everything in terms of coding seemed flawless. Debugging led to the conclusion that after an update on the OpenEMR, consistency between some files was lost and that caused the whole critical situation. A small file of the module is included in Appendix A1 as an indication of the work in the engineering part. Once the application was reinstalled from the beginning and the files that had to do with

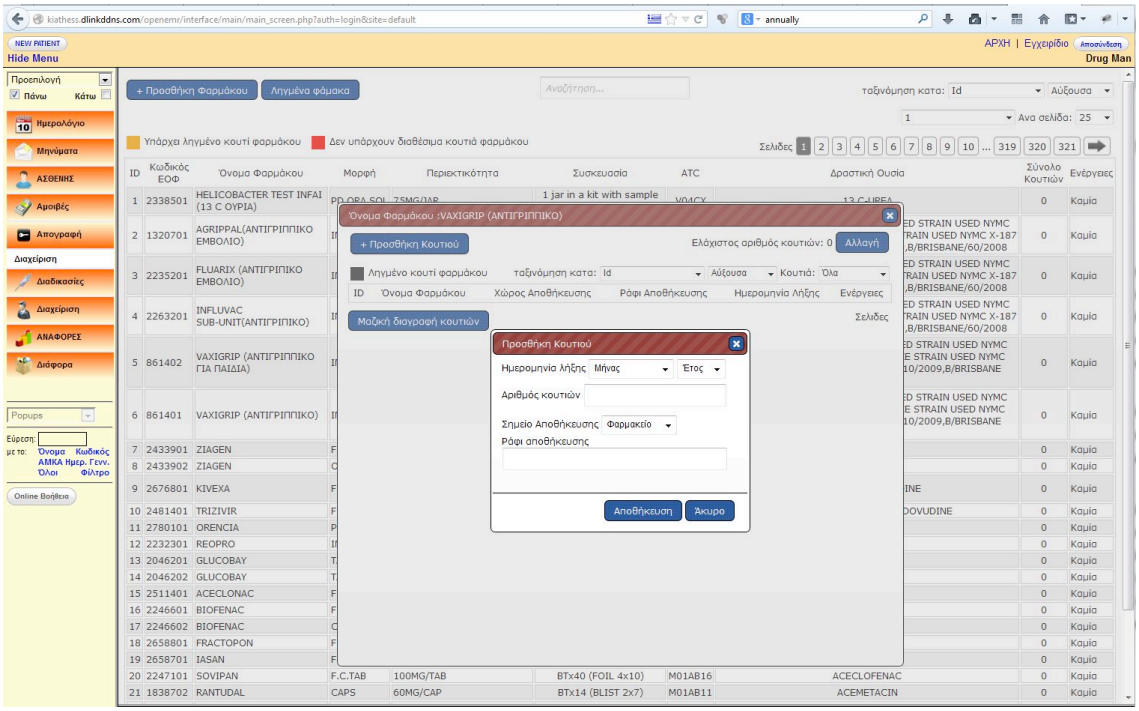
the left navigation menu got the proper alternations everything worked like a charm. Pictures of the integration of the new module are following.



Picture 11: OpenEMR's main tree structure after the implementation of the new module



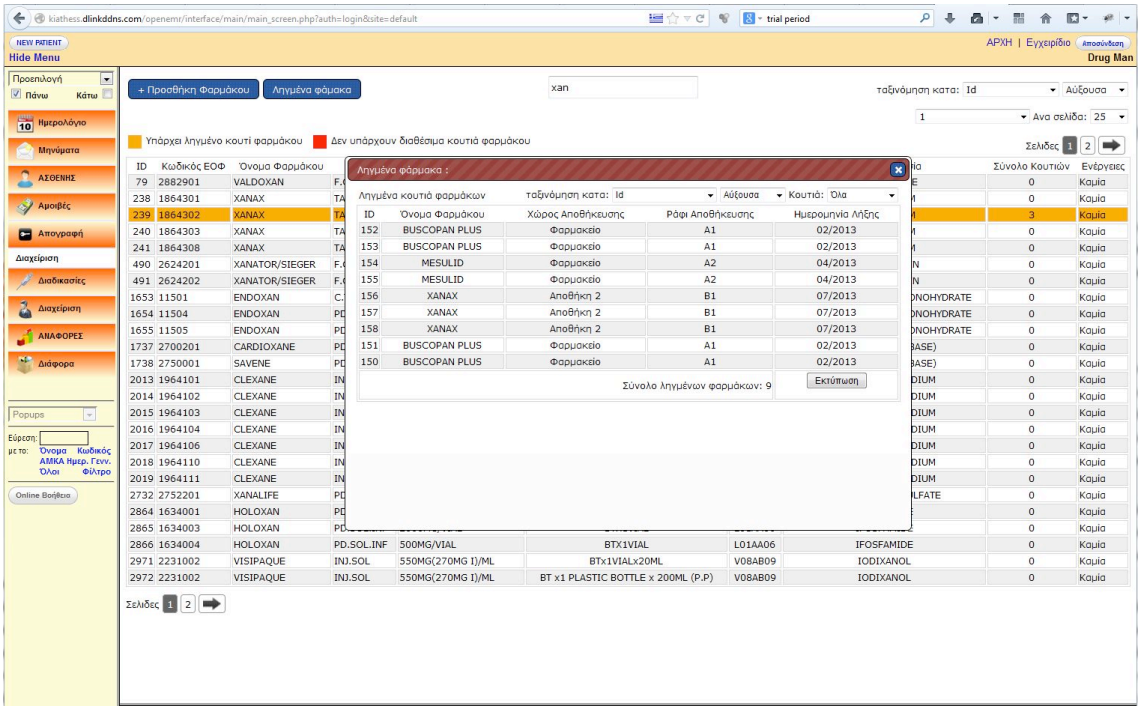
Picture 12: Interface of the developed Dispensary module with the list of the drugs



Picture 13: Adding an amount of drugs using the developed interface

The proper installation was followed by a period of assessment by those who would be using the program. A brief seminar took place so as to make the users familiar with the interface and explain them how to use the abilities of the module providing them a small guide as well. In addition to that, users were allowed a period of time to interact and play with the new module in order to find possible bugs and check whether it suits or not their needs and in what way. The initial development was based on the demands that the same people who work at the pharmacy department of the Social Infirmary had posed. So the discussion followed afterwards was more than intriguing. The discussion took place after the trial period and led to a couple of more improvements and features that would ease their everyday routine while sorting and discarding huge piles of medicine.

A couple of errors in the coding that had to do with the amount of the expired medicine that was presented by the application compared to what was initially registered in the program was fixed. Furthermore the ability to print a list, Picture 14, with all those medicine that needed to be disposed of was added so as to facilitate their everyday use. More storage options were added such as numbers of the storage units, refrigerators, drugs kept in a safe, cancer cell medicine and colors so as to facilitate the usage of the program. Moreover, a lot UI improvement took place due to the fact that the computers used there had a small screen resolution and the users wanted not to have scroll down



Picture 14: Ability to print a list with the expired drugs

bars in the pop-up windows that may be opened while asking something from the program. At this point we must not forget to mention that the OpenEMR application was up and running for the doctors and other users of the Social Infirmary without being disturbed by the new module added in the application.

4.2 Quality Evaluation

As it was presented in the second chapter PHP_Depend provides the developers with a capable number of metrics that each one of them implicates a different part of an application's source code. In this section the various reports that can be generated with the use of PHP_Depend will be discussed. This will be done having as a basis the source code of the OpenEMR in an attempt to evaluate its quality with structural measurements.

The reports being generated vary from machine readable XML files that contain highly detailed information about several quality aspects of the analyzed project, to human readable visualizations that provide a very abstract view of the project's code quality.

4.2.1 PEAR & PHP_Depend

To get such reports PHP_Depend has to be installed on the system. The preferred way to install it is using the PEAR installer and PHP_Depends' PEAR channel where one can always find the latest stable version of PHP_Depend. PEAR [19] is a community driven project which purpose is to provide structured libraries of open-source code for PHP users. Furthermore PEAR offers coding style standards for code written in PHP along with a system of code distribution and package maintenance so as to provide re-usable components of code to PHP developers.

Once PEAR is installed one has to register its PEAR channel pear.pdepend.org that is used to distribute PHP_Depend as seen in the Picture 15 following.

```
~ $ pear channel-discover pear.pdepend.org
Adding Channel "pear.pdepend.org" succeeded
Discovery of channel "pear.pdepend.org" succeeded
```

Picture 15: Discovering PEAR pdepend channel

Knowing the PHP_Depened's PEAR channel now the actual tool can be installed. So from the specific channel the PHP_Depend package is installed to the system as seen in the next Picture 16.

```
~ $ pear install pdepend/PHP_Depend-beta
downloading PHP_Depend-0.10.0RC1.tgz ...
Starting to download PHP_Depend-0.10.0RC1.tgz (164,193 bytes)
.....................................done: 164,193 bytes
install ok: channel://pear.pdepend.org/PHP_Depend-0.10.0RC1
```

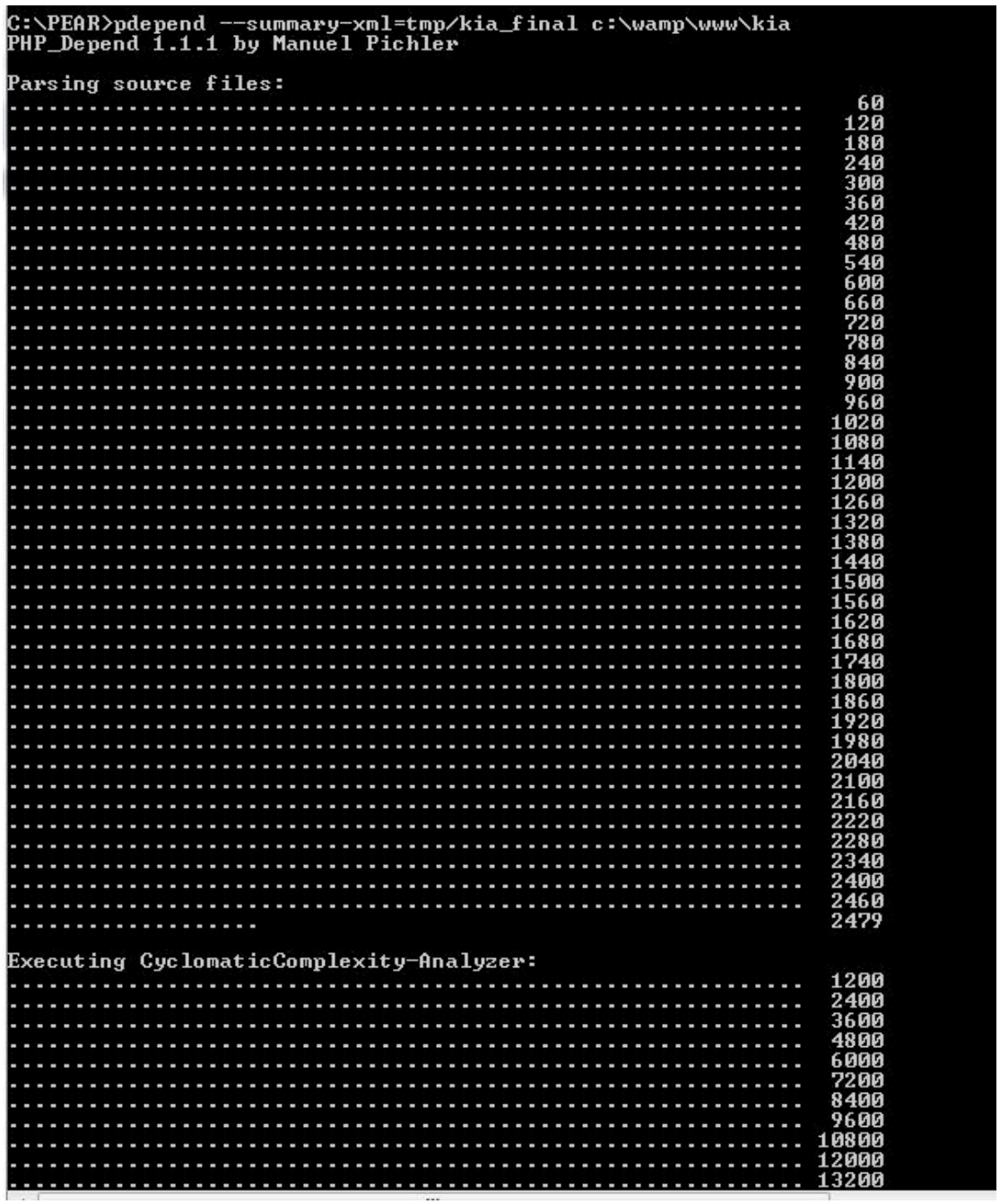
Picture 16: Installing PHP_Depend through PEAR

After the installation the PHP_Depend source file can be found inside the local PEAR directory, Picture 17.

```
~ $ ls `pear config-get php_dir`/PHP
Depend  Depend.php
```

Picture 17: PHP_Depend is now installed as a tool in our PHP folder

Now that PHP_Depend has been installed correctly we run it against the source code of OpenEMR project, Picture 18, and generate a highly detailed XML report and some viewable charts.



Picture 18: PHP_Depend code analysis on OpenEMR's source code

After about 23 minutes and capable usage of memory the first XML report is generated as can be seen in the following Picture 19

Picture 19: PHP_Depend is now installed as a tool in our PHP folder

Because of the size of the OpenEMR project the detailed XML report is quite extensive in length. As an indication of the results generated the first five hundred lines of the XML file generated have been included in the Appendix B1, in order to show the detailed analysis that took place. Each single PHP file in every folder and subfolder of the application is being analyzed to several metrics some of them for example are: cloc(Comment Lines to Code), eloc(Executable Lines of Code), lloc(Logical Lines of Code), loc(Lines of Code), ncloc(Non Comment lines of Code), npath(Non Comment lines of Code) the above have to do with the PHP files included in the folders.

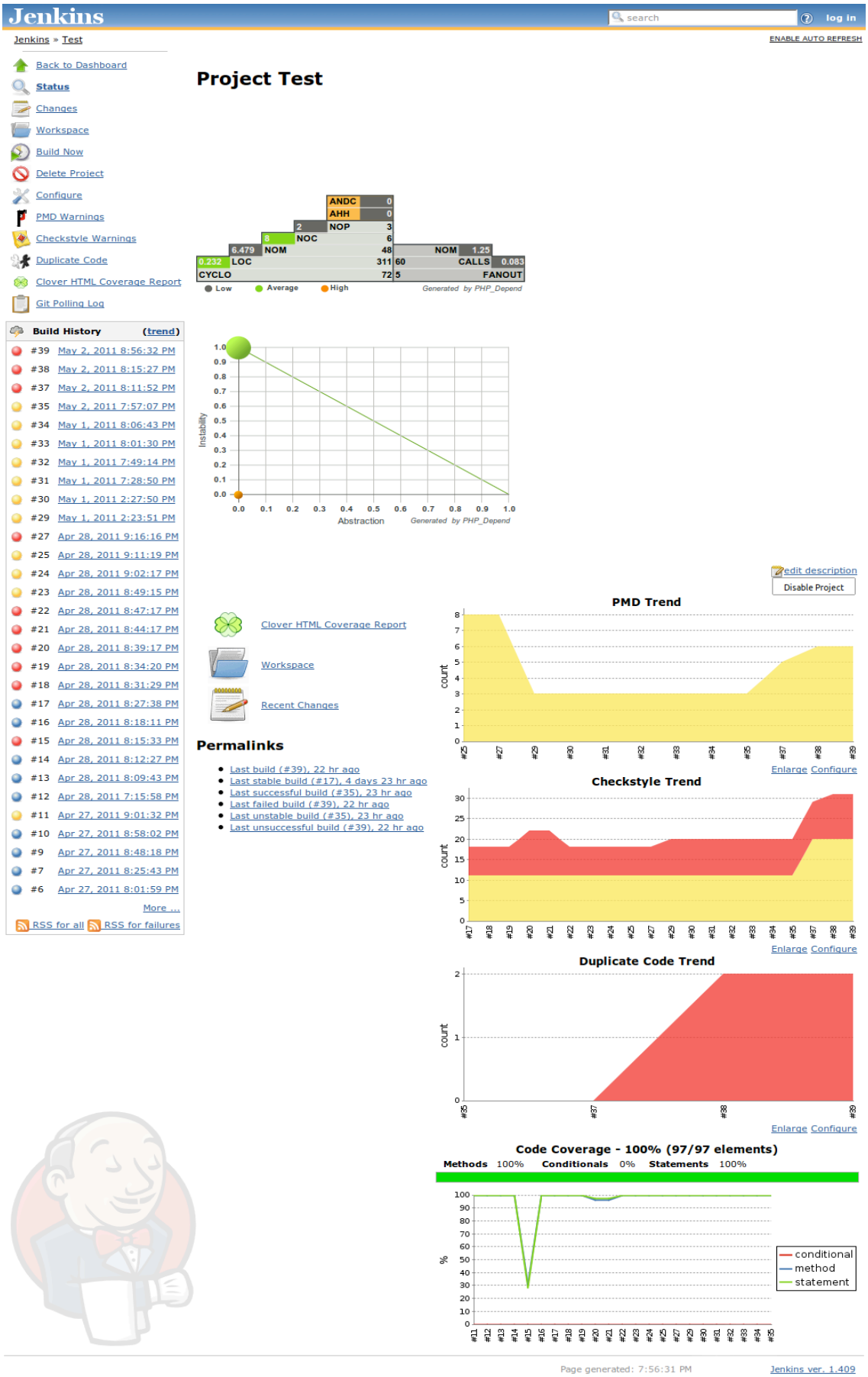
Then the source code is divided into packages. It is unclear though how PHP_Depend breaks the code into packages. A guess could be according to folders in the application. In each package we can find the classes that PHP_Depend identified

and within every class the methods that are called. For each package, class and method there are extended metrics like: for package: cr(Code Rank), noc(Number of Classes), nof(Number of Functions), noi(Number of Interfaces), nom(Number of Methods), rcr(Reverse Code Rank). for class: ca(Afferent Coupling), cbo(Coupling Between objects), ce(Efferent Coupling), cis(Class Interface Size), cloc(Commnet Lines of Code). for method: ccn(Cyclomatic Complexity Number), ccn2(Extened Cyclomatic Complexity Number) and many others.

Furthermore, there is a second XML report that contains all the package dependencies. Each package is analyzed in numbers as far as Total Classes is concerned which are then divided in Concrete Classes and Abstract Classes. Then it follows the connection between the classes such as which one depends upon another, and which class is being used by another package. Due to the extended length of this file as well, only the first five hundred lines of XML file generated have been included in Appendix B2.

These XML reports seem to be extremely useful, but trying to read them on their own when the project is developed is not such a great help. Using frameworks allows developers running automated tests on code during development. Frameworks such as Zend [24], PHPunit [25] or Jenkins [11] have the ability of a continuous integration server that can manage running all kind of quality tools, such as PHP_depend, a developer might want. These kinds of frameworks have a central point of access for all XML reports and send notifications when a build failed during the development process. An example of an eye candy report which is far more readable is following. In Picture 20 one can see how Jenkins framework produces a report compiling the XML reports of several different quality assurance tools.

Human readable reports are more meaningful compared to machine readable XML files. Readable reports come in handy when there is a need to detect design or quality flaws in an application. Actually, these kinds of reports are a good indication whether the overall quality trend of an application is positive or negative. Furthermore they provide great assistance to developers who can get easily a better overview on a new, unknown software application. On the contrary machine readable XML files are good candidates for a continuous integration system or other reporting tools. Frameworks that utilize these kinds of XML reports can either generate custom reports according to the developer's needs from all the detailed XML data or can trigger an alert when a quality metric exceeds a configured threshold.



Picture 20: Quality Assurance Tools report using Jenkins framework

4.2.2 PHP_Depend and visualization of metrics

PHP_Depend as a quality assurance tool offers two types [14], [15] of human readable visualizations that provide a very abstract view of the project's code quality.

1. The Abstraction Instability Chart &
2. The Overview Pyramid.

Abstraction – Instability Chart

In Object Oriented programming it is a good practice to reduce the dependencies between the implementing classes in order to have flexible and scalable software. This could be done by developing against abstractions which means both, abstract classes and interfaces. With the use of abstractions there is some sort of a convention provided. These abstractions could be used to bind and expand the application with new classes that fulfill this convention. Besides the scalability of the application that benefits using abstractions, there is a reduction in the risk of breaks in multiple subsystems when something changes into a single part of the application.

During the coding of an application taking into consideration all these dependencies may seem impossible, especially in large projects. For that reason the use of a tool seems a necessity to assist with the development of the project.

PHP_Depend based on extensive metrics collected, generates the Abstraction – Instability Chart or A – I chart [15]. This chart depicts the quality the application design in terms of scalability, reusability and maintainability. Those terms are being affected by the inner package dependencies and package abstractions and are illustrated in a form of an abstract/instability chart.

PHP_Depend calculates the following metrics by counting classes, interfaces and dependencies.

- Ca - Afferent Coupling

Afferent Coupling describes the number of other packages that depend upon classes in the analyzed package. This value indicates how changes to classes in the analyzed package would influence other parts of the software.

- Ce - Efferent Coupling

Efferent Coupling describes the number of other packages that depend upon classes from this package. This value denotes how sensitive this package is due to changes to other packages.

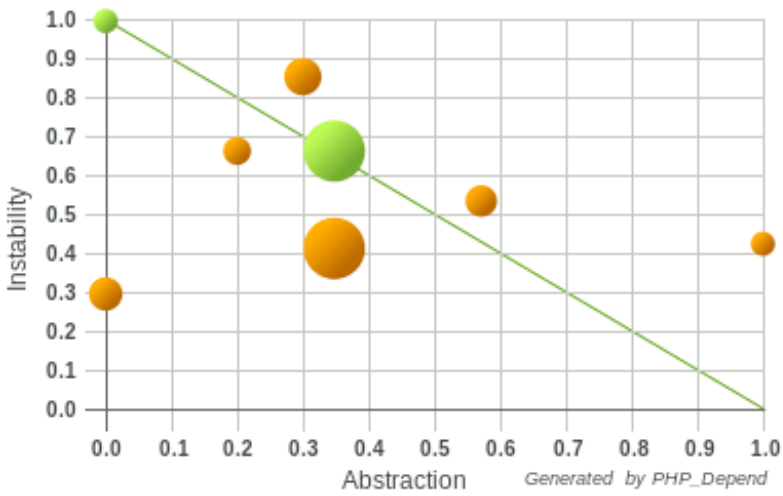
- I - Instability

Instability is the ratio between efferent coupling (Ce) and the total package coupling (Ca + Ce) as seen on the following equation I = (Ce / (Ce + Ca)) that produces results in the range of [0,1]. When I equal zero a maximally stable package that depends upon nothing is indicated. When I equal one a total instable package that has no incoming dependencies but depends upon other packages is described.

- A - Abstraction:

Abstraction is the ratio between abstract classes (ac) and the total of all classes (ac + cc) that is calculated by A = (ac / (ac + cc)) with results within the range of [0,1], [23]. When A gets zero value it means that all classes in this package are non-abstract whereas when A get value one it shows a package that is being consisted only of abstract classes and interfaces.

Using the above values a chart can be created as in the following Picture 21 that depicts the relationship between the instability (I) and the abstraction (A).



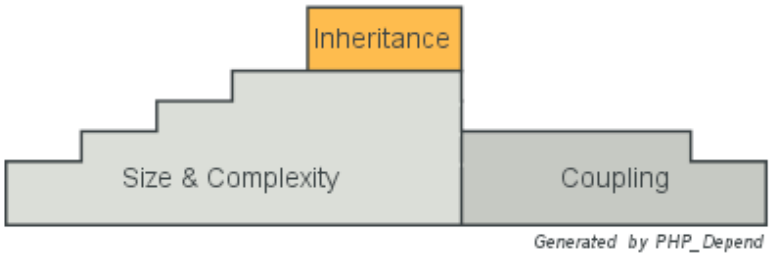
Picture 21: Graphical view of PHP_Depend's metrics

Due to the fact though that within a project it is not possible for every package to achieve the optimal values of A = 1, I = 0 or A = 0, I = 1, the diagonal between the two corners is being drawn. The diagonal is called the Main sequence and represents an average between abstraction (A) and instability (I). As a result packages that are neighboring with the diagonal have a balanced proportion between abstraction and instability. The packages are desirably expected to be as close as possible to the main sequence. For this purpose a new metric [(D) – Distance] is being introduced that indicates the

normalized distance from the main diagonal. Distance is calculated by the following equation D = (A + I) -1) and gets values from [0, 1]

Overview Pyramid

Structures such as the Overview Pyramid [14] are used so as to describe a complete software application in a single chart. They depict in a compact manner the relationships between several metric categories. Hence metrics from categories like Coupling, Inheritance and Size & Complexity are used. In the following Picture 22 can be seen the basic structure of an Overview Pyramid.



Picture 22: Base structure of an Overview Pyramid

The metrics that are used in each category are list below.

- Coupling

Metrics from this category [26] show the relation within different program parts of the analyzed software application.

CALLS The metric is about counting the number of distinct function & method-calls. With the term distinct is meant that method calls within a function or the method-body is only counted once.

FANOUT metric provides information about other classes referenced by a class or an interface. It counts only those classes that are not part of the same Inheritance branch.

- Inheritance

Both metrics in this category show an overview of the use of Inheritance within the analyzed application.

ANDC stands for the Average Number of Derived Classes metric that describes the average of derived classes. In software system of ten classes and an ANDC metric value of 0.5 means, that every second class is derived from another class.

AHH Average Hierarchy Height metric shows the average depth of the inheritance hierarchy. In an application system of ten classes when AHH has a metric value of 1 can

be interpreted in two ways. One is that five classes inherit from five other classes within the analyzed application and the second one that five classes inherit from a single root class.

- Size & Complexity

In this category can be found the most often used set of metrics which depict the connections between methods, classes and packages in the analyzed software application.

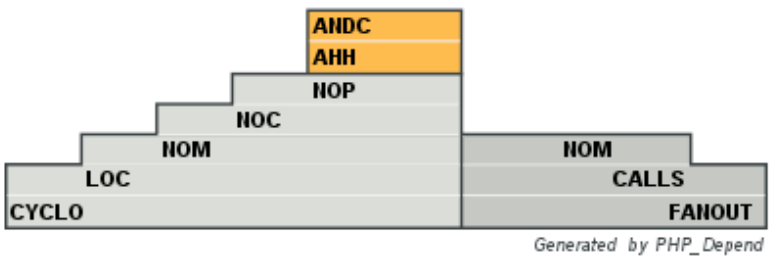
NOP The Number of Packages metric counts the packages within the analyzed application software.

NOC The Number of Classes metric counts the declared classes within the analyzed software application.

NOM The Number of Methods metric counts all declared methods, which means both class methods and simple functions.

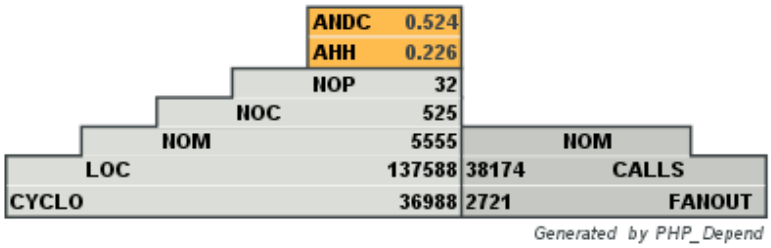
LOC The Lines of Code metric counts the number of executable source code lines within the analyzed software system. For the accurate calculation of LOC PHP_Depend counts only non-whitespace lines that are not commented lines.

CYCLO The Cyclomatic Complexity number [21] is software metric that measures the number of linearly independent paths through a program's source code.



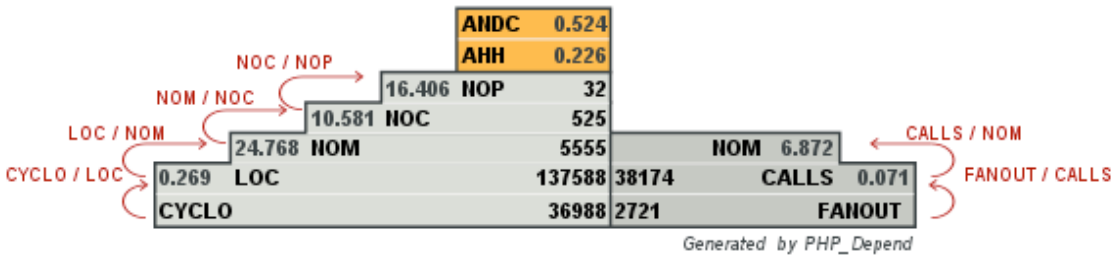
Picture 23: Metrics used in the Overview Pyramid

Being familiar with the metrics used in the Overview Pyramid, it would be easier to understand them following an example with computed values over an application. In Picture 24 a filled Overview Pyramid can be seen.



Picture 24: The filled Overview Pyramid

The picture figures the Overview Pyramid containing the computed values for the measured CYCLO, LOC, NOM, NOC and NOP metrics in the Size & Complexity section. In the same way the rest of the metrics are placed within the pyramid. In order to interpret the meaning of the pyramid the measured LOC and NOM with values 137588 and 5555 respectively shows that in average each operation/method has 25 lines of code which is calculated dividing LOC/NOM. Likewise each class contains 10.6 methods calculated by NOM/NOC. Each package is consisted of 16.5 classes dividing NOC/NOP. The results are placed into the pyramid as well and we have the fully computed average value that can be seen in the Picture 25 following.



Picture 25: Computed average values in the Overview Pyramid

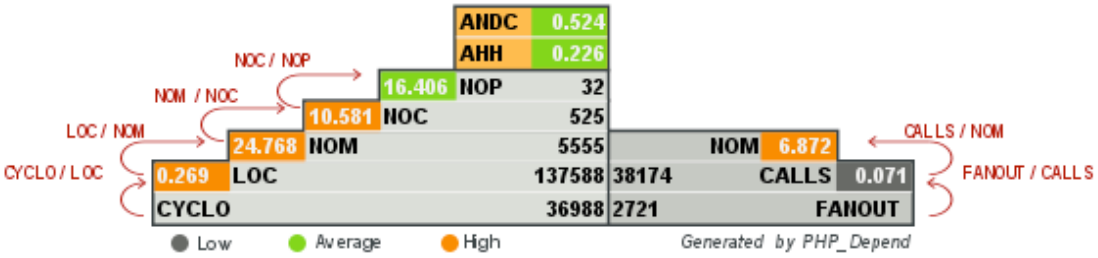
Quality assurance tools are used in order to improve the quality of the developing application software. In order for this to take place there is a need for a set of adequate reference values that are being compared with the computed values of the developing application. Thus it is possible to classify the results into low, average and high respectively to the reference values. The current version of PHP_Depend supports a single set of reference values that can be seen in Table 1 based on a paper for the optimization and improvement of Object-Oriented Systems [20].

Table 1: Reference values

Metric	Low	Average	High
CYCLO/LOC	0.16	0.2	0.24
LOC/NOM	7	10	13
NOM/NOC	4	7	10
NOC/NOP	6	17	26
CALLS/NOM	2.01	2.62	3.2
FANOUT/CALLS	0.56	0.62	0.68
ANDC	0.25	0.41	0.57
AHH	0.09	0.21	0.32

Following the reference values when PHP_Depend generates the specific Overview Pyramid can classify the computed results. The categorization is depicted in colors as

well, with PHP_Depend coloring the background so as to depict whether the difference with the reference results is optimum or not. The completed colored Overview Pyramid can be seen in Picture 26 following.



Picture 26: The complete Overview Pyramid

Through PHP_Depend's Overview Pyramid one can get a first impression of a software system. Through a single chart that is size independent and without any expensive source code analysis an experienced developer can easily understand what can be expected from the analyzed application. With the help of this tool and the appropriate know-how even a first cost analysis can be done for an unknown software system. The benefit though of such quality assurance tools is that the obtained knowledge can always be used in future projects during the initial design phase.

4.3 Results

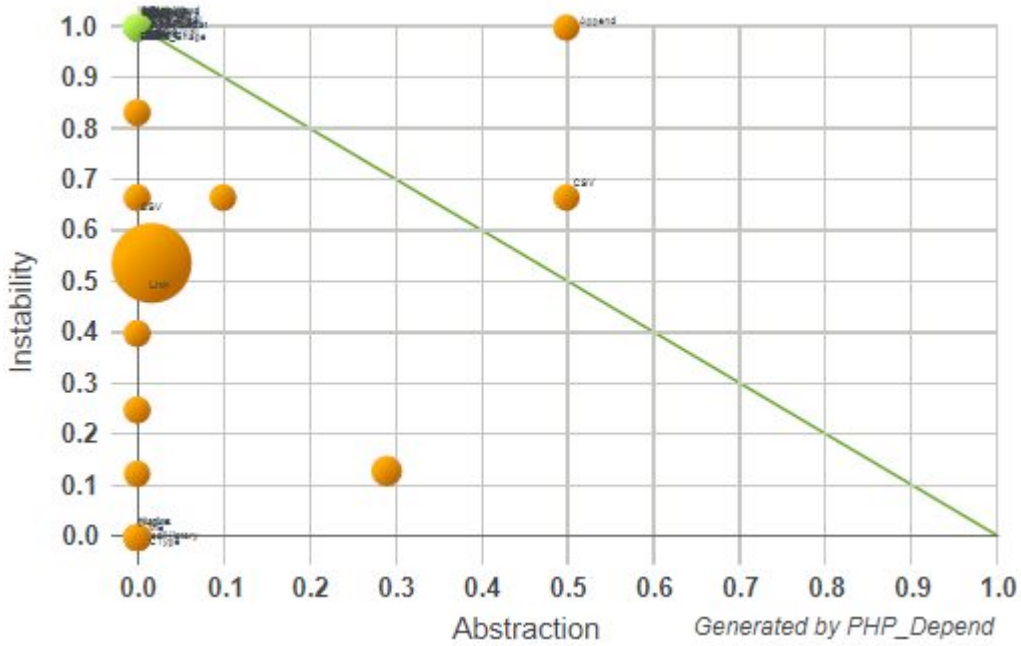
As it was aforementioned in chapter 4.2.1 the execution of PHP_Depend against the source code of OpenEMR generates two XML files. Due to the size of OpenEMR and the extensive metrics that PHP_Depend stores in those files the results would be needed more than a thousand and a half pages of paper. And that would be only for the one file. As an indication of the detailed metric analysis that took place, the first five hundred lines of each XML file can be found in Appendix B1 and B2. Through that small section of metrics one can see that PHP_Depend divides the code into packages and creates several types of metrics as those mentioned in Chapter 3 and can be found what metric indication they represent in Picture 9.

In the first XML file one can find all the structural metrics that have to do with the size and the complexity of the software system, whereas in the second XML file there are those types of metrics that have to do with the inheritance and the dependencies within the packages of the software system. XML reports generated by PHP_Depend might seem extremely useful to an experienced PHP developer but due to their size they cannot be easily processed especially if we have large software systems.

At this point it should be mentioned again that such machine readable XML files demand developing frameworks which through automations are able to continuously run tests and assess the results on the developing source code. A continuous integration server has the ability to run simultaneously several quality assurance tests posed by the developer and sends notification when a build of the project fails to pass the set quality threshold. Thus alterations can be done during the development of the software system and system errors can be prevented.

Besides the machine readable XML reports PHP_Depend provides the developer with human readable charts that was presented in the previous section. The Abstraction Instability Chart [15] and the Overview Pyramid [14] are an easy and efficient way for an experienced user to get a first glimpse on the developing software's quality and decide whether it is on the right track in terms of quality. Actually developers through human readable charts can have an overview on projects under development. Thus they can spot flaws in the system and intervene before the source code is completed.

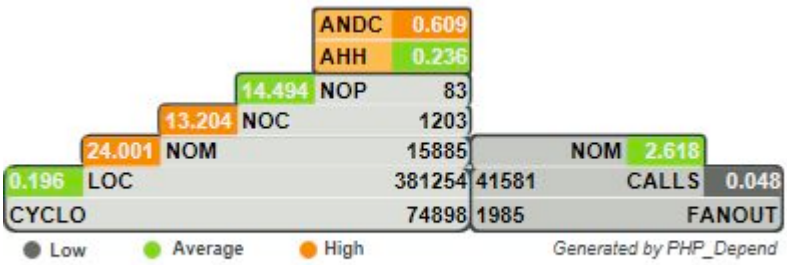
PHP_Depend can be used as well against completed software systems to determine where they stand in terms of quality compared to some reference metrics. Running PHP_Depend against OpenEMR's source code besides the two XML files generated two readable charts being depicted in the following Pictures 27 and 28.



Picture 27: OpenEMR's Abstraction – Instability chart

The Abstraction – Instability Chart or A – I chart for OpenEMR shows that many of its packages are instable. A large number of packages can be found on (I, A) = (1, 0) which means that these packages have total dependence on other packages within the software system (I = 1) and cannot be used for future program scalability (A = 0). When Abstraction equals zero there are no abstract classes within the package that would allow other new classes to hook into that part of the program [22]. Furthermore a capable amount of packages are outside the main diagonal and not on the optimal values of (I, A) = (1, 0) and (0, 1). These packages are marked with the orange color on the diagram and would need a more balanced relationship between Instability and Abstraction in order to move on top of the main diagonal. In other words a refactoring would be needed in order to reduce the distance from the main diagonal. In any case though, within a project it is not possible for every package to be on the main sequence. In order for this to happen quality assurance should be taken into consideration during the development of a software system.

The metrics obtained in the analysis of OpenEMR's source code by the Overview Pyramid are depicted in Picture 28 following, colored accordingly to proposed scale



Picture 28: OpenEMR's complete Overview Pyramid

(Low, Average, High). In Table 2 following in the next page one can see the retrieved values by PHP_Depend against the referenced values for Object-Oriented Systems [20]. It is noted that OpenEMR has one average and one high value in Inheritance metrics. Inheritance is one of the highly desired characteristics of Object-Oriented Programming, as it encourages software reuse. It should be noted that a suitable depth in the inheritance tree contributes to a better level of complexity, impacting favorably on software maintenance. In terms of coupling OpenEMR partially meets the average values on CALLS. Size & Complexity show an average value for CYCLO and NOP but a bit high number in Line of Codes per Method and Number of Methods per Class.

Table 2: OpenEMR's metrics versus reference values

Reference Values	Size & Complexity				Ineritance		Coupling	
	CYCLO	LOC	NOM	NOP	ANDC	AHH	CALLS	FANOUT
LOW	0.16	7	4	6	0.25	0.09	2.01	0.56
AVERAGE	0.2	10	7	17	0.41	0.21	2.62	0.62
HIGH	0.24	13	10	26	0.57	0.32	3.2	0.68
OpenEMR	0.196	24.001	13.204	14.494	0.609	0.236	2.618	0.048

Measuring the quality attributes shows that OpenEMR as an open-source software system with several developers across its large community support is a well-developed software system. It may not be great in terms of scalability and all analyzed metrics do not meet the Object-Oriented Criteria but with the proper refactoring it could be revamped in terms of quality.

5 Conclusion

This thesis was set out to engineer en electronic medical record information system for the needs of the Social Infirmary of Thessaloniki and evaluate its structure quality, using one of the most recent Quality Assurance tools such as PHP_Depend against the source code of a large open source software system as the OpenEMR project.

Open source software principles have been adapted to several types of user-generated projects leading to successful open source products. There are many examples of widespread open source products and one of them is OpenEMR. It is a medical software system that can support with ease both a physician in his private infirmary and a large hospital facility with several clinics. But due to differentiations in the pharmaceutical sector across countries all over the world its dispensary module was not compliant with the Greek standards.

For that reason a new dispensary module was developed and fully integrated within the original application in order to facilitate everyday needs of the Social Infirmary Pharmacy and its two repositories. The functional aspect of the project was assessed by the users based on their everyday interaction with the application. Fine tunings were made in order to improve user's experience and make the module respond to their needs. The quality aspect was assessed with the use of PHP_Depend quality assurance tool. Structural measurements were taken in order to verify whether large open source projects can cope well in terms of "software quality".

The findings of the quality aspect were specific and summarized within the respective chapter. OpenEMR seems to have a good level of complexity something which comes in favor of software maintenance, but seems weak in terms of scalability and future expansions. It implements software reuse due to its scale but doesn't actually meet all the criteria that characterize Object-Oriented programming. A potential refactoring with the use of new PHP framework which can include numerous Quality Assurance tools can certainly improve it structural quality even if it is not viewable by the single user.

The debate about “software quality” can be extensive and multifaceted. To achieve better results in terms of “software quality” needs continuous assessment during the developing process. PHP frameworks can help in that direction with their ability to incorporate quality assurance tools and continuously evaluate the produced source code. But are all frameworks equally capable to promote the same quality standards. Exploring that as a future research can facilitate the attainment of this goal.

Bibliography

1. OEMR non-profit organization: http://www.oemr.org/
2. The OpenEMR project website: http://www.open-emr.org/
3. John Noll, Sarah Beecham, Dominik Seichter. “A qualitative study of open source software development: the OpenEMR project”. IEEE Computer Society. 2011
4. The OpenEMR features: http://www.open-emr.org/wiki/index.php/OpenEMR_Features
5. National Coordinator for Health Information Technology: http://oncchpl.force.com/ehrcert/CHPLHome
6. InfoWorld Bossies (Best of Open Source Software) http://www.infoworld.com/infoworld-bossie-awards-755
7. Sebastian Bergmann, Stefan Priebsch. “Real-World Solutions for Developing High-Quality PHP Frameworks and Applications”. Wiley Publishing, Inc. 2011
8. The PHP Quality Assurance Tool chain: http://phpqatools.org/
9. Thomas Koch. “Timeline of PHP quality assurance tools”. gearconf Düsseldorf. 2009
10. Anatoliy Okhotnikov “Unit testing” Softjourn, Inc. 2011 http://www.slideshare.net/AcidumIrae/unit-testing-eng
11. Jenkins framework official site http://jenkins-ci.org/
12. What is PHP _Depend? http://pdepend.org/documentation/what-is-php-depend.html
13. Joel Jones. “Abstract Syntax Tree Implementations Idioms”. University of Alabama. 2003
14. Overview Pyramid http://pdepend.org/documentation/handbook/reports/overview-pyramid.html

15. Abstraction Instability Chart: http://pdepend.org/documentation/handbook/reports/abstraction-instability-chart.html
16. Social Infirmary of Thessaloniki website: http://www.kiathess.gr/
17. GreekLUG official website: http://www.greeklug.gr/
18. DynDNS services official website: http://dyn.com/dns/
19. PEAR - PHP Extension and Application Repository http://pear.php.net/index.php
20. Michele Lanza, Radu Marinescu. “Using Software Metrics to Characterize, Evaluate, and Improve the Design of Object-Oriented Systems”. Springer-Verlag Berlin Heidelberg. 2006
21. Thomas J. McCabe. “A Complexity Measure”. IEEE Transactions on Software Enginerring.1976
22. Julio Acosta, Cristina Gresner, Gladys Dapozo, Marcelo Estayno. “Medición de atributos OOP en frameworks desarrollo PHP” CACIC. 2012
23. Tom Mens, Michele Lanza. “A graph-Based Metamodel for Object-Oriented Software Metrics” Elsevier- Electronic Notes in Theoretical Computer Science vol. 72. No 2. 2002. http://www.elsevier.nl/locate/entcs/volume72.html
24. Zend Framework: http://framework.zend.com/
25. PhpUnit - unit testing framework for PHP: http://phpunit.sourceforge.net/
26. L. Yu, S. R. Schach, K. Chen, and J. Offutt. “Categorization of common coupling and its application to the maintainability of the Linux kernel”. IEEE Transactions on Software Engineering, vol. 30, No 10. 2004.

Appendix

A1. Source Code – drug_pack.php file

In this section of the appendix *drug_pack.php* source code was included to show the work that has been done in the engineering section of this project while developing the dispensary module to fit into OpenEMR. This is one small file amongst the files developed for the dispensary module.

```
<?php
require_once("../../globals.php");
require_once("$srcdir/log.inc");
$drug_pack_id = $_GET["drug_pack_id"];
?>
    <script>
    $(function(){
        $( ".button" ).button();
    })
    </script>
<?php
if($_GET["action"] == 'edit'){
    $results_drug_pack_info = mysql_query("SELECT * FROM drugs_packs WHERE id='".$drug_pack_id."'");
    $row_drug_pack_info = mysql_fetch_array($results_drug_pack_info);
    $expire_date_month = date('m',strtotime($row_drug_pack_info["expire_date"]));
    $expire_date_year = date('Y',strtotime($row_drug_pack_info["expire_date"]));
    $storage = $row_drug_pack_info["storage"];
    $rack_name= $row_drug_pack_info["rack_name"];
    $months = array('Ιανουάριος', 'Φεβρουάριος','Μάρτιος','Απρίλιος','Μάϊος','Ιούνιος','Ιούλιος','Αύγουστος','Σεπτέμβριος','Οκτώβριος','Νοέμβριος','Δεκέμβριος');
    $months_values = array('01', '02','03','04','05','06','07','08','09','10','11','12');
```

```
?>
        <form id="edit_drug_pack_form" >
        <div>
            Ημερομηνία λήξης
            <select class="defaultText"  name="month"  >
            <option value="0">Μήνας</option>
         <?php
             for($i=0;$i<=11;$i++){
                 if($months_values["$i"] == $expire_date_month){$selected = 'selected="selected"';}else{$selected='';}
                 echo '<option '.$selected.' value="'.$months_values["$i"].'">'.$months["$i"].'</option>';
             }?>
            </select>
            <select class="defaultText"  name="year">
                    <option value="0">Έτος</option>
                    <?php
                     for($i=0;$i<=50;$i++){
                         $opt_year = date('Y') + $i;
                         if($expire_date_year == $opt_year){$selected = 'selected="selected"';}else{$selected='';}
                         echo  '<option '.$selected.' value="'.$opt_year.'">'.$opt_year.' </option>';
                     }?>
             </select>
            </div>
            <div style="margin-top:6px;">
            Σημείο Αποθήκευσης
            <select class="defaultText" name="storage">
                <option <?php if($storage == 0){echo 'selected="selected"';}?> value='0'>Φαρμακείο</option>
                <option <?php if($storage == 1){echo 'selected="selected"';}?> value='1'>Αποθήκη 1</option>
                <option <?php if($storage == 2){echo 'selected="selected"';}?> value='2'>Αποθήκη 2</option>
        <option <?php if($storage == 3){echo 'selected="selected"';}?> value='3'>Ψυγείο</option>
```

```
                </select><br>
                Ράφι αποθήκευσης
                 <input type="text" class="defaultText" name="rack_name" value="<?php echo $rack_name?> "><br>
    </div>
                <input type="hidden"  name="drug_pack_id" value="<?php echo $drug_pack_id ?>"/>
          <input type="hidden"  name="edit_drug_pack" value="1"/>

     <div style="display:block;margin:0 auto;width:70%;margin-top:20px;">
                <a class="button" id="edit_drug_pack_save" >Αποθήκευση</a>
                <a class="button" id="edit_drug_pack_cancel" >Ακύρωση</a>
    </div>
          </form>
<?php }
else{
?>
    <div style="font-size:14px;font-weight:bold;text-align:center;">Είστε σίγουρος πως θέλετε να διαγράψετε αυτό το κουτί;</div>
    <form id="edit_drug_pack_form">
  <input type="hidden"  name="edit_drug_pack" value="0"/>
          <input type="hidden"  name="drug_pack_id" value="<?php echo $drug_pack_id ?>"/>
     <div style="display:block;margin:0 auto;width:58%;margin-top:50px;">
                <a class="button" id="edit_drug_pack_save" >Διαγραφή</a>
                <a class="button" id="edit_drug_pack_cancel" >Ακύρωση</a>
    </div>
          </form>
<?php }?>
```

B1. PHP_Depend – XML Metrics generated

In this section of the appendix there are included the first 500 lines of the *metrics.xml* file that was generated by PHP_Depend while analyzing the source code of OpenEMR. In this file we have the all the metrics produced by the PHP_Depend during the source code analysis.

<?xml version="1.0" encoding="UTF-8"?>

<metrics generated="2013-10-31T08:49:58" pdepend="1.1.1" ahh="0.23580786026201" andc="0.60858794384806" calls="41581" ccn="65800" ccn2="74898" cloc="124025" clsa="37" clsc="1166" eloc="381254" fanout="1985" leafs="1053" lloc="227662" loc="551839" maxDIT="8" ncloc="427814" noc="1203" nof="2643" noi="9" nom="13242" nop="83" roots="68">

<files>

<file name="C:\wamp\www\kia\Tests\BaseHarness.class.php" cloc="15" eloc="57" lloc="31" loc="82" ncloc="67"/>

<file name="C:\wamp\www\kia\Tests\FormattingTest.php" cloc="19" eloc="28" lloc="10" loc="52" ncloc="33"/>

<file name="C:\wamp\www\kia\Tests\InstallerTest.php" cloc="33" eloc="110" lloc="60" loc="163" ncloc="130"/>

<file name="C:\wamp\www\kia\Tests\NumberToTextTest.php" cloc="17" eloc="24" lloc="8" loc="48" ncloc="31"/>

<file name="C:\wamp\www\kia\Tests\OptionsTest.php" cloc="14" eloc="16" lloc="9" loc="36" ncloc="22"/>

<file name="C:\wamp\www\kia\contrib\forms\activity_impact\C_FormActivityImpact.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\activity_impact\FormActivityImpact.class.php" cloc="23" eloc="93" lloc="60" loc="134" ncloc="111"/>

<file name="C:\wamp\www\kia\contrib\forms\additional_studies\C_FormAdditionalStudies.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\additional_studies\FormAdditionalStudies.class.php" cloc="23" eloc="93" lloc="60" loc="134" ncloc="111"/>

<file name="C:\wamp\www\kia\contrib\forms\adult_progress_note\C_FormAdultProgressNote.class.php" cloc="0" eloc="64" lloc="48" loc="83" ncloc="83"/>

<file name="C:\wamp\www\kia\contrib\forms\adult_progress_note\FormAdultProgressNote.class.php" cloc="32" eloc="237" lloc="174" loc="343" ncloc="311"/>

<file name="C:\wamp\www\kia\contrib\forms\approved_physical\C_FormApprovedPhysical.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\approved_physical\FormApprovedPhysical.class.php" cloc="38" eloc="1575" lloc="1172" loc="1755" ncloc="1717"/>

<file name="C:\wamp\www\kia\contrib\forms\complaint_history\C_FormComplaintHistory.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\complaint_history\FormComplaintHistory.class.php" cloc="23" eloc="93" lloc="60" loc="133" ncloc="110"/>

<file name="C:\wamp\www\kia\contrib\forms\evaluation\C_FormEvaluation.class.php" cloc="0" eloc="56" lloc="42" loc="74" ncloc="74"/>

<file name="C:\wamp\www\kia\contrib\forms\evaluation\FormEvaluation.class.php" cloc="16" eloc="307" lloc="244" loc="411" ncloc="395"/>

<file name="C:\wamp\www\kia\contrib\forms\hand\C_FormHand.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\hand\FormHand.class.php" cloc="25" eloc="152" lloc="103" loc="207" ncloc="182"/>

<file name="C:\wamp\www\kia\contrib\forms\hp_tje_primary\C_FormHpTje.class.php" cloc="0" eloc="47" lloc="35" loc="61" ncloc="61"/>

<file name="C:\wamp\www\kia\contrib\forms\hp_tje_primary\FormHpTjePrimary.class.php" cloc="27" eloc="555" lloc="463" loc="698" ncloc="671"/>

<file name="C:\wamp\www\kia\contrib\forms\hpi\C_FormHPI.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\hpi\FormHPI.class.php" cloc="23" eloc="167" lloc="109" loc="216" ncloc="193"/>

<file name="C:\wamp\www\kia\contrib\forms\leg_length\C_FormLegLength.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\leg_length\FormLegLength.class.php" cloc="25" eloc="221" lloc="145" loc="279" ncloc="254"/>

<file name="C:\wamp\www\kia\contrib\forms\md_assessment\C_FormMDAssessment.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\md_assessment\FormMDAssessment.class.php" cloc="23" eloc="104" lloc="67" loc="145" ncloc="122"/>

<file name="C:\wamp\www\kia\contrib\forms\medical_orders\C_FormMedicalOrders.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\medical_orders\FormMedicalOrders.class.php" cloc="23" eloc="95" lloc="61" loc="136" ncloc="113"/>

<file name="C:\wamp\www\kia\contrib\forms\nursing_notes\C_FormNursingNotes.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\nursing_notes\FormNursingNotes.class.php" cloc="23" eloc="113" lloc="73" loc="156" ncloc="133"/>

<file name="C:\wamp\www\kia\contrib\forms\patient_instruction\C_FormPatientInstruction.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\patient_instruction\FormPatientInstruction.class.php" cloc="23" eloc="95" lloc="61" loc="136" ncloc="113"/>

<file name="C:\wamp\www\kia\contrib\forms\pfsh\C_FormPFSH.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\pfsh\FormPFSH.class.php" cloc="23" eloc="113" lloc="73" loc="156" ncloc="133"/>

<file name="C:\wamp\www\kia\contrib\forms\prior_auth\C_FormPriorAuth.class.php" cloc="0" eloc="45" lloc="33" loc="57" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\prior_auth\FormPriorAuth.class.php" cloc="16" eloc="76" lloc="48" loc="115" ncloc="99"/>

<file name="C:\wamp\www\kia\contrib\forms\prosthesis\C_FormProsthesis.class.php" cloc="0" eloc="54" lloc="40" loc="71" ncloc="71"/>

<file name="C:\wamp\www\kia\contrib\forms\prosthesis\FormProsthesis.class.php" cloc="16" eloc="293" lloc="199" loc="380" ncloc="364"/>

<file name="C:\wamp\www\kia\contrib\forms\review_of_systems\C_FormReviewOfSystems.class.php" cloc="0" eloc="56" lloc="42" loc="70" ncloc="70"/>

<file name="C:\wamp\www\kia\contrib\forms\review_of_systems\FormReviewOfSystems.class.php" cloc="20" eloc="274" lloc="216" loc="364" ncloc="344"/>

<file name="C:\wamp\www\kia\contrib\forms\rom\C_FormROM.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\rom\FormROM.class.php" cloc="37" eloc="1499" lloc="997" loc="1622" ncloc="1585"/>

<file name="C:\wamp\www\kia\contrib\forms\ros2\C_FormROS2.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\ros2\FormROS2.class.php" cloc="39" eloc="4333" lloc="3144" loc="4776" ncloc="4737"/>

<file name="C:\wamp\www\kia\contrib\forms\snellen\C_FormSnellen.class.php" cloc="5" eloc="48" lloc="34" loc="62" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\snellen\FormSnellen.class.php" cloc="25" eloc="123" lloc="81" loc="174" ncloc="149"/>

<file name="C:\wamp\www\kia\contrib\forms\soap2\C_FormSOAP.class.php" cloc="0" eloc="48" lloc="34" loc="57" ncloc="57"/>

<file name="C:\wamp\www\kia\contrib\forms\soap2\FormSOAP.class.php" cloc="35" eloc="230" lloc="151" loc="298" ncloc="263"/>

<file name="C:\wamp\www\kia\contrib\forms\well_child\C_FormWellChild.class.php" cloc="0" eloc="66" lloc="50" loc="84" ncloc="84"/>

<file name="C:\wamp\www\kia\contrib\forms\well_child\FormWellChild.class.php" cloc="24" eloc="516" lloc="401" loc="683" ncloc="659"/>

<file name="C:\wamp\www\kia\contrib\forms\well_child_care\C_WellChildCare.class.php" cloc="5" eloc="558" lloc="356" loc="602" ncloc="597"/>

<file name="C:\wamp\www\kia\contrib\forms\well_infant\C_FormWellInfant.class.php" cloc="0" eloc="66" lloc="50" loc="85" ncloc="85"/>

<file name="C:\wamp\www\kia\contrib\forms\well_infant\FormWellInfant.class.php" cloc="24" eloc="480" lloc="389" loc="637" ncloc="613"/>

<file name="C:\wamp\www\kia\controllers\C_BillingContact.class.php" cloc="4" eloc="51" lloc="34" loc="73" ncloc="69"/>

<file name="C:\wamp\www\kia\controllers\C_Document.class.php" cloc="118" eloc="857" lloc="648" loc="1095" ncloc="977"/>

<file name="C:\wamp\www\kia\controllers\C_DocumentCategory.class.php" cloc="14" eloc="126" lloc="92" loc="163" ncloc="149"/>

<file name="C:\wamp\www\kia\controllers\C_Hl7.class.php" cloc="13" eloc="28" lloc="19" loc="49" ncloc="36"/>

<file name="C:\wamp\www\kia\controllers\C_InsuranceCompany.class.php" cloc="11" eloc="104" lloc="82" loc="145" ncloc="134"/>

<file name="C:\wamp\www\kia\controllers\C_InsuranceNumbers.class.php" cloc="10" eloc="95" lloc="69" loc="129" ncloc="119"/>

<file name="C:\wamp\www\kia\controllers\C_PatientFinder.class.php" cloc="42" eloc="81" lloc="67" loc="142" ncloc="100"/>

<file name="C:\wamp\www\kia\controllers\C_Pharmacy.class.php" cloc="6" eloc="57" lloc="39" loc="76" ncloc="70"/>

<file name="C:\wamp\www\kia\controllers\C_PracticeSettings.class.php" cloc="21" eloc="85" lloc="72" loc="152" ncloc="131"/>

<file name="C:\wamp\www\kia\controllers\C_Prescription.class.php" cloc="85" eloc="726" lloc="540" loc="875" ncloc="790"/>
<file name="C:\wamp\www\kia\controllers\C_X12Partner.class.php" cloc="10" eloc="55" lloc="39" loc="81" ncloc="71"/>
<file name="C:\wamp\www\kia\custom\BillingExport.csv.php" cloc="34" eloc="180" lloc="75" loc="245" ncloc="211"/>
<file name="C:\wamp\www\kia\gacl\Cache_Lite\Hashed_Cache_Lite.php" cloc="58" eloc="106" lloc="70" loc="185" ncloc="127"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-active-record.inc.php" cloc="68" eloc="459" lloc="374" loc="608" ncloc="540"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-datadict.inc.php" cloc="131" eloc="551" lloc="487" loc="784" ncloc="653"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-exceptions.inc.php" cloc="23" eloc="47" lloc="41" loc="82" ncloc="59"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-iterator.inc.php" cloc="20" eloc="47" lloc="22" loc="85" ncloc="65"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-pager.inc.php" cloc="71" eloc="195" lloc="141" loc="290" ncloc="219"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-pear.inc.php" cloc="175" eloc="160" lloc="128" loc="374" ncloc="199"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-perf.inc.php" cloc="184" eloc="731" lloc="615" loc="1056" ncloc="872"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb-php4.inc.php" cloc="8" eloc="4" lloc="0" loc="16" ncloc="8"/>
<file name="C:\wamp\www\kia\gacl\adodb\adodb.inc.php" cloc="1331" eloc="2487" lloc="1997" loc="4215" ncloc="2884"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-access.inc.php" cloc="13" eloc="62" lloc="65" loc="95" ncloc="82"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-db2.inc.php" cloc="35" eloc="86" lloc="88" loc="143" ncloc="108"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-firebird.inc.php" cloc="21" eloc="101" lloc="96" loc="151" ncloc="130"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-generic.inc.php" cloc="69" eloc="40" lloc="47" loc="125" ncloc="56"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-ibase.inc.php" cloc="11" eloc="40" lloc="47" loc="67" ncloc="56"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-informix.inc.php" cloc="12" eloc="52" lloc="59" loc="80" ncloc="68"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-mssql.inc.php" cloc="126" eloc="126" lloc="129" loc="282" ncloc="156"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-mysql.inc.php" cloc="35" eloc="117" lloc="131" loc="181" ncloc="146"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-oci8.inc.php" cloc="35" eloc="201" lloc="190" loc="282" ncloc="247"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-postgres.inc.php" cloc="99" eloc="234" lloc="208" loc="371" ncloc="272"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-sapdb.inc.php" cloc="14" eloc="90" lloc="82" loc="121" ncloc="107"/>
<file name="C:\wamp\www\kia\gacl\adodb\datadict\datadict-sybase.inc.php" cloc="83" eloc="117" lloc="119" loc="228" ncloc="145"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-access.inc.php" cloc="39" eloc="41" lloc="27" loc="86" ncloc="47"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado.inc.php" cloc="214" eloc="379" lloc="343" loc="634" ncloc="420"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado5.inc.php" cloc="218" eloc="400" lloc="362" loc="668" ncloc="450"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado_access.inc.php" cloc="14" eloc="30" lloc="24" loc="54" ncloc="40"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado_mssql.inc.php" cloc="24" eloc="105" lloc="79" loc="147" ncloc="123"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-borland_ibase.inc.php" cloc="20" eloc="59" lloc="45" loc="92" ncloc="72"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-csv.inc.php" cloc="26" eloc="149" lloc="105" loc="207" ncloc="181"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-db2.inc.php" cloc="135" eloc="575" lloc="508" loc="828" ncloc="693"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-fbsql.inc.php" cloc="29" eloc="198" lloc="159" loc="266" ncloc="237"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-firebird.inc.php" cloc="15" eloc="48" lloc="41" loc="77" ncloc="62"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ibase.inc.php" cloc="105" eloc="695" lloc="613" loc="887" ncloc="782"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-informix.inc.php" cloc="15" eloc="20" lloc="11" loc="40" ncloc="25"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-informix72.inc.php" cloc="79" eloc="342" lloc="255" loc="475" ncloc="396"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ldap.inc.php" cloc="125" eloc="234" lloc="171" loc="406" ncloc="281"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssql.inc.php" cloc="185" eloc="730" lloc="578" loc="1035" ncloc="850"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssqlpo.inc.php" cloc="18" eloc="35" lloc="24" loc="62" ncloc="44"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysql.inc.php" cloc="75" eloc="595" lloc="494" loc="782" ncloc="707"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqli.inc.php" cloc="154" eloc="703" lloc="567" loc="1003" ncloc="849"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqlt.inc.php" cloc="21" eloc="112" lloc="98" loc="155" ncloc="134"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-netezza.inc.php" cloc="33" eloc="115" lloc="102" loc="171" ncloc="138"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8.inc.php" cloc="340" eloc="986" lloc="820" loc="1503" ncloc="1163"/>

<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci805.inc.php" cloc="24" eloc="27" lloc="15" loc="59" ncloc="35"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8po.inc.php" cloc="43" eloc="150" lloc="108" loc="217" ncloc="174"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc.inc.php" cloc="136" eloc="506" lloc="435" loc="738" ncloc="602"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_db2.inc.php" cloc="106" eloc="224" lloc="192" loc="368" ncloc="262"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_mssql.inc.php" cloc="31" eloc="201" lloc="158" loc="265" ncloc="234"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_oracle.inc.php" cloc="19" eloc="80" lloc="61" loc="115" ncloc="96"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php" cloc="69" eloc="587" lloc="463" loc="735" ncloc="666"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp_unicode.inc.php" cloc="19" eloc="14" lloc="8" loc="40" ncloc="21"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oracle.inc.php" cloc="44" eloc="224" lloc="183" loc="338" ncloc="294"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo.inc.php" cloc="69" eloc="401" lloc="334" loc="564" ncloc="495"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_mssql.inc.php" cloc="9" eloc="40" lloc="24" loc="61" ncloc="52"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_mysql.inc.php" cloc="14" eloc="130" lloc="102" loc="168" ncloc="154"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_oci.inc.php" cloc="10" eloc="71" lloc="57" loc="93" ncloc="83"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_pgsql.inc.php" cloc="31" eloc="177" lloc="132" loc="231" ncloc="200"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres64.inc.php" cloc="198" eloc="731" lloc="588" loc="1054" ncloc="856"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres7.inc.php" cloc="47" eloc="186" lloc="126" loc="270" ncloc="223"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-proxy.inc.php" cloc="11" eloc="18" lloc="11" loc="33" ncloc="22"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sapdb.inc.php" cloc="32" eloc="130" lloc="89" loc="184" ncloc="152"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlanywhere.inc.php" cloc="54" eloc="84" lloc="62" loc="170" ncloc="116"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlite.inc.php" cloc="51" eloc="296" lloc="240" loc="398" ncloc="347"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlitepo.inc.php" cloc="21" eloc="31" lloc="18" loc="62" ncloc="41"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase.inc.php" cloc="61" eloc="301" lloc="239" loc="419" ncloc="358"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase_ase.inc.php" cloc="14" eloc="89" lloc="59" loc="119" ncloc="105"/>
<file name="C:\wamp\www\kia\gacl\adodb\drivers\adodb-vfp.inc.php" cloc="18" eloc="70" lloc="58" loc="107" ncloc="89"/>
<file name="C:\wamp\www\kia\gacl\adodb\perf\perf-db2.inc.php" cloc="15" eloc="75" lloc="32" loc="102" ncloc="87"/>
<file name="C:\wamp\www\kia\gacl\adodb\perf\perf-informix.inc.php" cloc="19" eloc="40" lloc="7" loc="71" ncloc="52"/>
<file name="C:\wamp\www\kia\gacl\adodb\perf\perf-mssql.inc.php" cloc="20" eloc="123" lloc="65" loc="164" ncloc="144"/>
<file name="C:\wamp\www\kia\gacl\adodb\perf\perf-mysql.inc.php" cloc="35" eloc="234" lloc="168" loc="315" ncloc="280"/>
<file name="C:\wamp\www\kia\gacl\adodb\perf\perf-oci8.inc.php" cloc="32" eloc="417" lloc="159" loc="509" ncloc="477"/>
<file name="C:\wamp\www\kia\gacl\adodb\perf\perf-postgres.inc.php" cloc="17" eloc="97" lloc="29" loc="124" ncloc="107"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-compress-bzip2.php" cloc="35" eloc="62" lloc="41" loc="119" ncloc="84"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-compress-gzip.php" cloc="29" eloc="47" lloc="30" loc="93" ncloc="64"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-mcrypt.php" cloc="35" eloc="55" lloc="38" loc="110" ncloc="75"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-md5.php" cloc="16" eloc="15" lloc="10" loc="39" ncloc="23"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-secret.php" cloc="21" eloc="18" lloc="11" loc="49" ncloc="28"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-sha1.php" cloc="3" eloc="17" lloc="10" loc="32" ncloc="29"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-session.php" cloc="182" eloc="604" lloc="472" loc="934" ncloc="752"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\adodb-session2.php" cloc="212" eloc="580" lloc="444" loc="941" ncloc="729"/>
<file name="C:\wamp\www\kia\gacl\adodb\session\crypt.inc.php" cloc="1" eloc="112" lloc="76" loc="161" ncloc="160"/>
<file name="C:\wamp\www\kia\gacl\soap\nusoap.php" cloc="1280" eloc="2615" lloc="1764" loc="4099" ncloc="2819"/>
<file name="C:\wamp\www\kia\gacl\test_suite\acl_tests.php" cloc="22" eloc="149" lloc="119" loc="223" ncloc="201"/>
<file name="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php" cloc="126" eloc="435" lloc="296" loc="633" ncloc="507"/>
<file name="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php" cloc="11" eloc="221" lloc="176" loc="269" ncloc="258"/>
<file name="C:\wamp\www\kia\gacl\test_suite\run.php" cloc="18" eloc="114" lloc="75" loc="162" ncloc="144"/>
<file name="C:\wamp\www\kia\gacl\test_suite\unit_tests.php" cloc="28" eloc="419" lloc="331" loc="563" ncloc="535"/>
<file name="C:\wamp\www\kia\interface\clickmap\AbstractClickmapModel.php" cloc="105" eloc="108" lloc="64" loc="240" ncloc="135"/>

<file name="C:\wamp\www\kia\interface\clickmap\C_AbstractClickmap.php" cloc="85" eloc="74" lloc="59" loc="175" ncloc="90"/>

<file name="C:\wamp\www\kia\interface\forms\fee_sheet\review\fee_sheet_classes.php" cloc="34" eloc="75" lloc="48" loc="122" ncloc="88"/>

<file name="C:\wamp\www\kia\interface\forms\fee_sheet\review\fee_sheet_options_queries.php" cloc="30" eloc="43" lloc="24" loc="81" ncloc="51"/>

<file name="C:\wamp\www\kia\interface\forms\painmap\C_FormPainMap.class.php" cloc="44" eloc="37" lloc="16" loc="90" ncloc="46"/>

<file name="C:\wamp\www\kia\interface\forms\painmap\FormPainMap.php" cloc="29" eloc="15" lloc="8" loc="50" ncloc="21"/>

<file name="C:\wamp\www\kia\interface\forms\prior_auth\C_FormPriorAuth.class.php" cloc="0" eloc="46" lloc="34" loc="60" ncloc="60"/>

<file name="C:\wamp\www\kia\interface\forms\prior_auth\FormPriorAuth.class.php" cloc="16" eloc="76" lloc="48" loc="115" ncloc="99"/>

<file name="C:\wamp\www\kia\interface\forms\ros\C_FormROS.class.php" cloc="0" eloc="49" lloc="34" loc="67" ncloc="67"/>

<file name="C:\wamp\www\kia\interface\forms\ros\FormROS.class.php" cloc="20" eloc="1309" lloc="869" loc="1373" ncloc="1353"/>

<file name="C:\wamp\www\kia\interface\forms\soap\C_FormSOAP.class.php" cloc="0" eloc="48" lloc="34" loc="64" ncloc="64"/>

<file name="C:\wamp\www\kia\interface\forms\soap\FormSOAP.class.php" cloc="18" eloc="123" lloc="80" loc="156" ncloc="138"/>

<file name="C:\wamp\www\kia\interface\forms\vitalsM\C_FormVitalsM.class.php" cloc="0" eloc="92" lloc="81" loc="108" ncloc="108"/>

<file name="C:\wamp\www\kia\interface\forms\vitalsM\FormVitalsM.class.php" cloc="16" eloc="215" lloc="143" loc="280" ncloc="264"/>

<file name="C:\wamp\www\kia\interface\forms\vitals\C_FormVitals.class.php" cloc="5" eloc="106" lloc="90" loc="133" ncloc="128"/>

<file name="C:\wamp\www\kia\interface\forms\vitals\FormVitals.class.php" cloc="21" eloc="231" lloc="151" loc="270" ncloc="249"/>

<file name="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pcSmarty.class.php" cloc="39" eloc="83" lloc="76" loc="130" ncloc="91"/>

<file name="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Benchmark\Timer.php" cloc="84" eloc="47" lloc="31" loc="143" ncloc="59"/>

<file name="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Date\Calc.php" cloc="650" eloc="730" lloc="533" loc="1580" ncloc="930"/>

<file name="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Smarty\Config_File.class.php" cloc="125" eloc="179" lloc="121" loc="353" ncloc="228"/>

<file name="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Smarty\Smarty.class.php" cloc="539" eloc="1305" lloc="837" loc="2056" ncloc="1517"/>

<file name="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Smarty\Smarty_Compiler.class.php" cloc="242" eloc="945" lloc="711" loc="1415" ncloc="1173"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb-datadict.inc.php" cloc="83" eloc="430" lloc="397" loc="582" ncloc="499"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb-pager.inc.php" cloc="74" eloc="193" lloc="137" loc="290" ncloc="216"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb-pear.inc.php" cloc="164" eloc="155" lloc="121" loc="357" ncloc="193"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php" cloc="1205" eloc="1854" lloc="1436" loc="3354" ncloc="2149"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\crypt.inc.php" cloc="1" eloc="57" lloc="38" loc="64" ncloc="63"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-access.inc.php" cloc="12" eloc="61" lloc="63" loc="92" ncloc="80"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-db2.inc.php" cloc="13" eloc="48" lloc="56" loc="74" ncloc="61"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-generic.inc.php" cloc="68" eloc="39" lloc="45" loc="122" ncloc="54"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-ibase.inc.php" cloc="10" eloc="39" lloc="45" loc="64" ncloc="54"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-informix.inc.php" cloc="11" eloc="51" lloc="57" loc="77" ncloc="66"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-mssql.inc.php" cloc="82" eloc="107" lloc="118" loc="211" ncloc="129"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-mysql.inc.php" cloc="33" eloc="93" lloc="111" loc="147" ncloc="114"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-oci8.inc.php" cloc="34" eloc="173" lloc="162" loc="244" ncloc="210"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-postgres.inc.php" cloc="44" eloc="120" lloc="128" loc="191" ncloc="147"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-access.inc.php" cloc="16" eloc="50" lloc="37" loc="74" ncloc="58"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado.inc.php" cloc="215" eloc="340" lloc="305" loc="589" ncloc="374"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado_access.inc.php" cloc="13" eloc="26" lloc="16" loc="46" ncloc="33"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado_mssql.inc.php" cloc="17" eloc="33" lloc="18" loc="59" ncloc="42"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-borland_ibase.inc.php" cloc="19" eloc="50" lloc="36" loc="79" ncloc="60"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-csv.inc.php" cloc="23" eloc="149" lloc="105" loc="202" ncloc="179"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-db2.inc.php" cloc="80" eloc="156" lloc="133" loc="265" ncloc="185"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-fbsql.inc.php" cloc="28" eloc="196" lloc="157" loc="262" ncloc="234"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-firebird.inc.php" cloc="13" eloc="42" lloc="32" loc="67" ncloc="54"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ibase.inc.php" cloc="125" eloc="467" lloc="430" loc="665" ncloc="540"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-informix.inc.php" cloc="13" eloc="15" lloc="7" loc="30" ncloc="17"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-informix72.inc.php" cloc="53" eloc="219" lloc="154" loc="315" ncloc="262"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssql.inc.php" cloc="136" eloc="542" lloc="426" loc="762" ncloc="626"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssqlpo.inc.php" cloc="17" eloc="34" lloc="22" loc="59" ncloc="42"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mysql.inc.php" cloc="74" eloc="408" lloc="342" loc="566" ncloc="492"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mysqlt.inc.php" cloc="14" eloc="48" lloc="41" loc="76" ncloc="62"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci8.inc.php" cloc="264" eloc="683" lloc="565" loc="1061" ncloc="797"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci805.inc.php" cloc="23" eloc="26" lloc="13" loc="56" ncloc="33"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci8po.inc.php" cloc="28" eloc="119" lloc="88" loc="166" ncloc="138"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc.inc.php" cloc="113" eloc="467" lloc="396" loc="661" ncloc="548"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc_mssql.inc.php" cloc="26" eloc="121" lloc="94" loc="164" ncloc="138"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc_oracle.inc.php" cloc="18" eloc="79" lloc="58" loc="112" ncloc="94"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oracle.inc.php" cloc="38" eloc="190" lloc="159" loc="268" ncloc="230"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-postgres64.inc.php" cloc="151" eloc="500" lloc="424" loc="739" ncloc="588"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-postgres7.inc.php" cloc="18" eloc="44" lloc="25" loc="74" ncloc="56"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-proxy.inc.php" cloc="10" eloc="17" lloc="9" loc="30" ncloc="20"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sqlanywhere.inc.php" cloc="53" eloc="83" lloc="60" loc="167" ncloc="114"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sybase.inc.php" cloc="52" eloc="220" lloc="167" loc="316" ncloc="264"/>

<file name="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-vfp.inc.php" cloc="17" eloc="65" lloc="55" loc="98" ncloc="81"/>

<file name="C:\wamp\www\kia\interface\super\rules\base\library\ActionRouter.php" cloc="28" eloc="85" lloc="61" loc="137" ncloc="109"/>

<file name="C:\wamp\www\kia\interface\super\rules\base\library\BaseController.php" cloc="22" eloc="47" lloc="30" loc="82" ncloc="60"/>

<file name="C:\wamp\www\kia\interface\super\rules\base\library\ControllerRouter.php" cloc="14" eloc="21" lloc="12" loc="42" ncloc="28"/>

<file name="C:\wamp\www\kia\interface\super\rules\controllers\add\controller.php" cloc="6" eloc="7" lloc="2" loc="17" ncloc="11"/>

<file name="C:\wamp\www\kia\interface\super\rules\controllers\alerts\controller.php" cloc="20" eloc="42" lloc="29" loc="79" ncloc="59"/>

<file name="C:\wamp\www\kia\interface\super\rules\controllers\browse\controller.php" cloc="6" eloc="23" lloc="12" loc="38" ncloc="32"/>

<file name="C:\wamp\www\kia\interface\super\rules\controllers\detail\controller.php" cloc="6" eloc="14" lloc="7" loc="24" ncloc="18"/>

<file name="C:\wamp\www\kia\interface\super\rules\controllers\edit\controller.php" cloc="12" eloc="241" lloc="196" loc="302" ncloc="290"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\CdrAlertManager.class.php" cloc="25" eloc="27" lloc="18" loc="65" ncloc="40"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\CdrHelper.class.php" cloc="17" eloc="38" lloc="24" loc="68" ncloc="51"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\Code.php" cloc="12" eloc="17" lloc="11" loc="36" ncloc="24"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\CodeManager.php" cloc="18" eloc="42" lloc="25" loc="74" ncloc="56"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\Option.php" cloc="11" eloc="10" lloc="5" loc="25" ncloc="14"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervalDetail.php" cloc="30" eloc="19" lloc="12" loc="54" ncloc="24"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervalRange.php" cloc="16" eloc="27" lloc="16" loc="51" ncloc="35"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervalType.php" cloc="15" eloc="25" lloc="14" loc="48" ncloc="33"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervals.php" cloc="22" eloc="46" lloc="30" loc="79" ncloc="57"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\Rule.php" cloc="49" eloc="71" lloc="47" loc="141" ncloc="92"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleAction.php" cloc="11" eloc="32" lloc="22" loc="49" ncloc="38"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleActions.php" cloc="14" eloc="10" lloc="4" loc="28" ncloc="14"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteria.php" cloc="36" eloc="70" lloc="65" loc="128" ncloc="92"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaAge.php" cloc="15" eloc="52" lloc="36" loc="79" ncloc="64"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaAgeBuilder.php" cloc="22" eloc="33" lloc="18" loc="64" ncloc="42"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaAllergy.php" cloc="11" eloc="15" lloc="9" loc="32" ncloc="21"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaBuilder.php" cloc="18" eloc="7" lloc="6" loc="32" ncloc="14"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDatabaseBucket.php" cloc="16" eloc="84" lloc="58" loc="118" ncloc="102"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDatabaseBuilder.php" cloc="22" eloc="66" lloc="45" loc="104" ncloc="82"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDatabaseCustom.php" cloc="11" eloc="67" lloc="47" loc="93" ncloc="82"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDbView.php" cloc="11" eloc="18" lloc="11" loc="36" ncloc="25"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDiagnosis.php" cloc="11" eloc="41" lloc="30" loc="63" ncloc="52"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaFactory.php" cloc="28" eloc="71" lloc="54" loc="116" ncloc="88"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaFilterFactory.php" cloc="12" eloc="7" lloc="2" loc="24" ncloc="12"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaLifestyle.php" cloc="11" eloc="58" lloc="40" loc="88" ncloc="77"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaListsBuilder.php" cloc="28" eloc="60" lloc="39" loc="107" ncloc="79"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaMedicalIssue.php" cloc="11" eloc="15" lloc="9" loc="31" ncloc="20"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaMedication.php" cloc="11" eloc="15" lloc="9" loc="32" ncloc="21"/>

<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSex.php" cloc="11" eloc="32" lloc="21" loc="56" ncloc="45"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSexBuilder.php" cloc="22" eloc="16" lloc="8" loc="44" ncloc="22"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSimpleText.php" cloc="11" eloc="24" lloc="15" loc="43" ncloc="32"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSurgery.php" cloc="11" eloc="15" lloc="9" loc="32" ncloc="21"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaTargetFactory.php" cloc="21" eloc="20" lloc="11" loc="47" ncloc="26"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaType.php" cloc="17" eloc="47" lloc="27" loc="76" ncloc="59"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleFilters.php" cloc="14" eloc="11" lloc="5" loc="30" ncloc="16"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleManager.php" cloc="135" eloc="520" lloc="281" loc="745" ncloc="610"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleTargetActionGroup.php" cloc="17" eloc="20" lloc="12" loc="47" ncloc="30"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleTargets.php" cloc="14" eloc="11" lloc="5" loc="30" ncloc="16"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\RuleType.php" cloc="19" eloc="31" lloc="19" loc="59" ncloc="40"/>
<file name="C:\wamp\www\kia\interface\super\rules\library\TimeUnit.php" cloc="16" eloc="33" lloc="17" loc="56" ncloc="40"/>
<file name="C:\wamp\www\kia\library\Claim.class.php" cloc="223" eloc="961" lloc="695" loc="1323" ncloc="1100"/>
<file name="C:\wamp\www\kia\library\adldap\adLDAP.php" cloc="196" eloc="436" lloc="526" loc="726" ncloc="530"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-active-record.inc.php" cloc="116" eloc="746" lloc="615" loc="992" ncloc="876"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-active-recordx.inc.php" cloc="180" eloc="1114" lloc="794" loc="1422" ncloc="1242"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-datadict.inc.php" cloc="175" eloc="751" lloc="576" loc="1032" ncloc="857"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-exceptions.inc.php" cloc="23" eloc="47" lloc="41" loc="82" ncloc="59"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-memcache.lib.inc.php" cloc="37" eloc="127" lloc="110" loc="190" ncloc="153"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-pager.inc.php" cloc="71" eloc="195" lloc="141" loc="290" ncloc="219"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-pear.inc.php" cloc="175" eloc="160" lloc="128" loc="374" ncloc="199"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-perf.inc.php" cloc="184" eloc="769" lloc="644" loc="1099" ncloc="915"/>
<file name="C:\wamp\www\kia\library\adodb\adodb-php4.inc.php" cloc="8" eloc="4" lloc="0" loc="16" ncloc="8"/>
<file name="C:\wamp\www\kia\library\adodb\adodb.inc.php" cloc="1360" eloc="2615" lloc="2075" loc="4419" ncloc="3059"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-access.inc.php" cloc="13" eloc="63" lloc="66" loc="96" ncloc="83"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-db2.inc.php" cloc="35" eloc="87" lloc="89" loc="144" ncloc="109"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-firebird.inc.php" cloc="21" eloc="102" lloc="97" loc="152" ncloc="131"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-generic.inc.php" cloc="69" eloc="41" lloc="48" loc="126" ncloc="57"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-ibase.inc.php" cloc="11" eloc="41" lloc="48" loc="68" ncloc="57"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-informix.inc.php" cloc="12" eloc="53" lloc="60" loc="81" ncloc="69"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-mssql.inc.php" cloc="126" eloc="128" lloc="132" loc="284" ncloc="158"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-mssqlnative.inc.php" cloc="126" eloc="126" lloc="129" loc="282" ncloc="156"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-mysql.inc.php" cloc="35" eloc="118" lloc="132" loc="182" ncloc="147"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-oci8.inc.php" cloc="37" eloc="212" lloc="200" loc="297" ncloc="260"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-postgres.inc.php" cloc="116" eloc="285" lloc="245" loc="448" ncloc="332"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-sapdb.inc.php" cloc="14" eloc="91" lloc="83" loc="122" ncloc="108"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-sqlite.inc.php" cloc="28" eloc="60" lloc="69" loc="90" ncloc="62"/>
<file name="C:\wamp\www\kia\library\adodb\datadict\datadict-sybase.inc.php" cloc="83" eloc="118" lloc="120" loc="229" ncloc="146"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-access.inc.php" cloc="39" eloc="42" lloc="28" loc="87" ncloc="48"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ado.inc.php" cloc="216" eloc="401" lloc="365" loc="660" ncloc="444"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ado5.inc.php" cloc="221" eloc="436" lloc="398" loc="708" ncloc="487"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ado_access.inc.php" cloc="19" eloc="27" lloc="18" loc="54" ncloc="35"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ado_mssql.inc.php" cloc="24" eloc="111" lloc="83" loc="154" ncloc="130"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ads.inc.php" cloc="159" eloc="538" lloc="425" loc="796" ncloc="637"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-borland_ibase.inc.php" cloc="20" eloc="59" lloc="45" loc="92" ncloc="72"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-csv.inc.php" cloc="26" eloc="149" lloc="105" loc="207" ncloc="181"/>

<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-db2.inc.php" cloc="136" eloc="589" lloc="524" loc="848" ncloc="712"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-db2oci.inc.php" cloc="51" eloc="145" lloc="123" loc="230" ncloc="179"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-db2ora.inc.php" cloc="13" eloc="48" lloc="35" loc="80" ncloc="67"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-fbsql.inc.php" cloc="29" eloc="198" lloc="159" loc="266" ncloc="237"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-firebird.inc.php" cloc="15" eloc="48" lloc="41" loc="77" ncloc="62"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ibase.inc.php" cloc="105" eloc="695" lloc="613" loc="887" ncloc="782"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-informix.inc.php" cloc="15" eloc="20" lloc="11" loc="40" ncloc="25"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-informix72.inc.php" cloc="79" eloc="342" lloc="255" loc="475" ncloc="396"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-ldap.inc.php" cloc="126" eloc="247" lloc="178" loc="423" ncloc="297"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql.inc.php" cloc="200" eloc="792" lloc="622" loc="1116" ncloc="916"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql_n.inc.php" cloc="65" eloc="83" lloc="55" loc="171" ncloc="106"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlnative.inc.php" cloc="162" eloc="661" lloc="533" loc="917" ncloc="755"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlpo.inc.php" cloc="18" eloc="35" lloc="24" loc="62" ncloc="44"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mysql.inc.php" cloc="76" eloc="607" lloc="507" loc="795" ncloc="719"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqli.inc.php" cloc="195" eloc="837" lloc="687" loc="1215" ncloc="1020"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlpo.inc.php" cloc="15" eloc="102" lloc="90" loc="138" ncloc="123"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlt.inc.php" cloc="21" eloc="112" lloc="98" loc="155" ncloc="134"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-netezza.inc.php" cloc="33" eloc="115" lloc="102" loc="171" ncloc="138"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-oci8.inc.php" cloc="365" eloc="1104" lloc="921" loc="1642" ncloc="1277"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-oci805.inc.php" cloc="24" eloc="27" lloc="15" loc="59" ncloc="35"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-oci8po.inc.php" cloc="43" eloc="155" lloc="112" loc="223" ncloc="180"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-odbc.inc.php" cloc="137" eloc="511" lloc="439" loc="744" ncloc="607"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-odbc_db2.inc.php" cloc="106" eloc="224" lloc="192" loc="368" ncloc="262"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-odbc_mssql.inc.php" cloc="31" eloc="235" lloc="180" loc="307" ncloc="276"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-odbc_oracle.inc.php" cloc="19" eloc="80" lloc="61" loc="115" ncloc="96"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-odbtp.inc.php" cloc="96" eloc="650" lloc="512" loc="840" ncloc="744"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-odbtp_unicode.inc.php" cloc="19" eloc="14" lloc="8" loc="40" ncloc="21"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-oracle.inc.php" cloc="44" eloc="228" lloc="189" loc="342" ncloc="298"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-pdo.inc.php" cloc="69" eloc="447" lloc="368" loc="626" ncloc="557"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-pdo_mssql.inc.php" cloc="9" eloc="40" lloc="24" loc="61" ncloc="52"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-pdo_mysql.inc.php" cloc="16" eloc="140" lloc="112" loc="182" ncloc="166"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-pdo_oci.inc.php" cloc="10" eloc="71" lloc="57" loc="93" ncloc="83"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-pdo_pgsql.inc.php" cloc="31" eloc="177" lloc="132" loc="231" ncloc="200"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-pdo_sqlite.inc.php" cloc="16" eloc="164" lloc="139" loc="203" ncloc="187"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-postgres64.inc.php" cloc="201" eloc="748" lloc="606" loc="1078" ncloc="877"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-postgres7.inc.php" cloc="52" eloc="221" lloc="135" loc="316" ncloc="264"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-proxy.inc.php" cloc="11" eloc="18" lloc="11" loc="33" ncloc="22"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sapdb.inc.php" cloc="32" eloc="130" lloc="89" loc="184" ncloc="152"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sqlanywhere.inc.php" cloc="54" eloc="84" lloc="62" loc="170" ncloc="116"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sqlite.inc.php" cloc="51" eloc="297" lloc="242" loc="399" ncloc="348"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sqlite3.inc.php" cloc="83" eloc="302" lloc="248" loc="430" ncloc="347"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sqlitepo.inc.php" cloc="21" eloc="31" lloc="18" loc="62" ncloc="41"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sybase.inc.php" cloc="61" eloc="310" lloc="244" loc="429" ncloc="368"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-sybase_ase.inc.php" cloc="14" eloc="89" lloc="59" loc="119" ncloc="105"/>
<file name="C:\wamp\www\kia\library\adodb\drivers\adodb-vfp.inc.php" cloc="18" eloc="70" lloc="58" loc="107" ncloc="89"/>
<file name="C:\wamp\www\kia\library\adodb\perf\perf-db2.inc.php" cloc="15" eloc="75" lloc="32" loc="102" ncloc="87"/>

<file name="C:\wamp\www\kia\library\adodb\perf\perf-informix.inc.php" cloc="19" eloc="40" lloc="7" loc="71" ncloc="52"/>
<file name="C:\wamp\www\kia\library\adodb\perf\perf-mssql.inc.php" cloc="20" eloc="123" lloc="65" loc="164" ncloc="144"/>
<file name="C:\wamp\www\kia\library\adodb\perf\perf-mssqlnative.inc.php" cloc="20" eloc="123" lloc="65" loc="164" ncloc="144"/>
<file name="C:\wamp\www\kia\library\adodb\perf\perf-mysql.inc.php" cloc="35" eloc="234" lloc="168" loc="315" ncloc="280"/>
<file name="C:\wamp\www\kia\library\adodb\perf\perf-oci8.inc.php" cloc="41" eloc="552" lloc="203" loc="685" ncloc="644"/>
<file name="C:\wamp\www\kia\library\adodb\perf\perf-postgres.inc.php" cloc="20" eloc="117" lloc="50" loc="153" ncloc="133"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-compress-bzip2.php" cloc="35" eloc="62" lloc="41" loc="119" ncloc="84"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-compress-gzip.php" cloc="29" eloc="47" lloc="30" loc="93" ncloc="64"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-encrypt-mcrypt.php" cloc="35" eloc="55" lloc="38" loc="110" ncloc="75"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-encrypt-md5.php" cloc="16" eloc="15" lloc="10" loc="39" ncloc="23"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-encrypt-secret.php" cloc="21" eloc="18" lloc="11" loc="49" ncloc="28"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-encrypt-sha1.php" cloc="3" eloc="17" lloc="10" loc="32" ncloc="29"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-session.php" cloc="182" eloc="604" lloc="472" loc="934" ncloc="752"/>
<file name="C:\wamp\www\kia\library\adodb\session\adodb-session2.php" cloc="215" eloc="584" lloc="454" loc="946" ncloc="731"/>
<file name="C:\wamp\www\kia\library\adodb\session\crypt.inc.php" cloc="1" eloc="112" lloc="76" loc="158" ncloc="157"/>
<file name="C:\wamp\www\kia\library\adodb\session\old\crypt.inc.php" cloc="1" eloc="57" lloc="38" loc="64" ncloc="63"/>
<file name="C:\wamp\www\kia\library\adodb\tests\test-active-record.php" cloc="19" eloc="99" lloc="76" loc="141" ncloc="122"/>
<file name="C:\wamp\www\kia\library\adodb\tests\test-active-relations.php" cloc="3" eloc="67" lloc="46" loc="87" ncloc="84"/>
<file name="C:\wamp\www\kia\library\adodb\tests\test-active-relationsx.php" cloc="9" eloc="367" lloc="290" loc="420" ncloc="411"/>
<file name="C:\wamp\www\kia\library\adodb\tests\test-php5.php" cloc="11" eloc="78" lloc="76" loc="115" ncloc="104"/>
<file name="C:\wamp\www\kia\library\classes\Address.class.php" cloc="22" eloc="125" lloc="83" loc="156" ncloc="134"/>
<file name="C:\wamp\www\kia\library\classes\CategoryTree.class.php" cloc="10" eloc="31" lloc="17" loc="53" ncloc="43"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Allergy.php" cloc="15" eloc="43" lloc="32" loc="63" ncloc="48"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\CareGoal.php" cloc="7" eloc="12" lloc="6" loc="23" ncloc="16"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Characteristic.php" cloc="8" eloc="51" lloc="32" loc="66" ncloc="58"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\ClinicalType.php" cloc="16" eloc="49" lloc="38" loc="74" ncloc="58"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Communication.php" cloc="13" eloc="21" lloc="12" loc="35" ncloc="22"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Diagnosis.php" cloc="16" eloc="50" lloc="39" loc="73" ncloc="57"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Encounter.php" cloc="17" eloc="64" lloc="45" loc="85" ncloc="68"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Helper.php" cloc="8" eloc="63" lloc="33" loc="82" ncloc="74"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\LabResult.php" cloc="9" eloc="63" lloc="28" loc="83" ncloc="74"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Medication.php" cloc="7" eloc="74" lloc="55" loc="93" ncloc="86"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\PhysicalExam.php" cloc="11" eloc="41" lloc="23" loc="58" ncloc="47"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\Range.php" cloc="7" eloc="21" lloc="11" loc="33" ncloc="26"/>
<file name="C:\wamp\www\kia\library\classes\ClinicalTypes\codes.php" cloc="10" eloc="166" lloc="11" loc="177" ncloc="167"/>
<file name="C:\wamp\www\kia\library\classes\Company.class.php" cloc="18" eloc="128" lloc="85" loc="155" ncloc="137"/>
<file name="C:\wamp\www\kia\library\classes\ConfigTree.class.php" cloc="7" eloc="9" lloc="4" loc="21" ncloc="14"/>
<file name="C:\wamp\www\kia\library\classes\Controller.class.php" cloc="13" eloc="138" lloc="96" loc="186" ncloc="173"/>
<file name="C:\wamp\www\kia\library\classes\CouchDB.class.php" cloc="33" eloc="78" lloc="54" loc="128" ncloc="95"/>
<file name="C:\wamp\www\kia\library\classes\Document.class.php" cloc="142" eloc="283" lloc="195" loc="476" ncloc="334"/>
<file name="C:\wamp\www\kia\library\classes\Installer.class.php" cloc="98" eloc="461" lloc="318" loc="601" ncloc="503"/>
<file name="C:\wamp\www\kia\library\classes\InsuranceCompany.class.php" cloc="37" eloc="278" lloc="162" loc="344" ncloc="307"/>
<file name="C:\wamp\www\kia\library\classes\InsuranceNumbers.class.php" cloc="7" eloc="102" lloc="67" loc="138" ncloc="131"/>
<file name="C:\wamp\www\kia\library\classes\Note.class.php" cloc="60" eloc="92" lloc="58" loc="175" ncloc="115"/>
<file name="C:\wamp\www\kia\library\classes\OFX.class.php" cloc="12" eloc="110" lloc="96" loc="133" ncloc="121"/>
<file name="C:\wamp\www\kia\library\classes\ORDataObject.class.php" cloc="35" eloc="112" lloc="75" loc="169" ncloc="134"/>

<file name="C:\wamp\www\kia\library\classes\POSRef.class.php" cloc="0" eloc="126" lloc="117" loc="132" ncloc="132"/>

<file name="C:\wamp\www\kia\library\classes\PQRIXml.class.php" cloc="7" eloc="65" lloc="43" loc="100" ncloc="93"/>

<file name="C:\wamp\www\kia\library\classes\Patient.class.php" cloc="16" eloc="47" lloc="43" loc="69" ncloc="53"/>

<file name="C:\wamp\www\kia\library\classes\Person.class.php" cloc="16" eloc="14" lloc="8" loc="36" ncloc="20"/>

<file name="C:\wamp\www\kia\library\classes\Pharmacy.class.php" cloc="27" eloc="184" lloc="125" loc="226" ncloc="199"/>

<file name="C:\wamp\www\kia\library\classes\PhoneNumber.class.php" cloc="27" eloc="141" lloc="97" loc="194" ncloc="167"/>

<file name="C:\wamp\www\kia\library\classes\Prescription.class.php" cloc="110" eloc="457" lloc="325" loc="643" ncloc="533"/>

<file name="C:\wamp\www\kia\library\classes\Provider.class.php" cloc="16" eloc="91" lloc="66" loc="128" ncloc="112"/>

<file name="C:\wamp\www\kia\library\classes\RXList.class.php" cloc="80" eloc="103" lloc="78" loc="192" ncloc="112"/>

<file name="C:\wamp\www\kia\library\classes\Tree.class.php" cloc="108" eloc="183" lloc="135" loc="356" ncloc="248"/>

<file name="C:\wamp\www\kia\library\classes\TreeMenu.php" cloc="429" eloc="304" lloc="195" loc="822" ncloc="393"/>

<file name="C:\wamp\www\kia\library\classes\WSClaim.class.php" cloc="26" eloc="197" lloc="132" loc="255" ncloc="229"/>

<file name="C:\wamp\www\kia\library\classes\WSProvider.class.php" cloc="2" eloc="45" lloc="36" loc="59" ncloc="57"/>

<file name="C:\wamp\www\kia\library\classes\WSWrapper.class.php" cloc="3" eloc="34" lloc="25" loc="44" ncloc="41"/>

<file name="C:\wamp\www\kia\library\classes\X12Partner.class.php" cloc="24" eloc="197" lloc="127" loc="256" ncloc="232"/>

<file name="C:\wamp\www\kia\library\classes\XmlWriterOemr.class.php" cloc="7" eloc="49" lloc="34" loc="59" ncloc="52"/>

<file name="C:\wamp\www\kia\library\classes\class.Handler_HL7v2.php" cloc="6" eloc="26" lloc="24" loc="38" ncloc="32"/>

<file name="C:\wamp\www\kia\library\classes\class.Parser_HL7v2.php" cloc="40" eloc="148" lloc="84" loc="208" ncloc="168"/>

<file name="C:\wamp\www\kia\library\classes\class.ezpdf.php" cloc="301" eloc="1126" lloc="944" loc="1557" ncloc="1256"/>

<file name="C:\wamp\www\kia\library\classes\class.phpmailer.php" cloc="797" eloc="1362" lloc="935" loc="2321" ncloc="1524"/>

<file name="C:\wamp\www\kia\library\classes\class.smtp.php" cloc="312" eloc="412" lloc="273" loc="815" ncloc="503"/>

<file name="C:\wamp\www\kia\library\classes\postmaster.php" cloc="9" eloc="46" lloc="29" loc="62" ncloc="53"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\AmcReportFactory.php" cloc="7" eloc="23" lloc="11" loc="34" ncloc="27"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\library\AMC_Unimplemented.php" cloc="7" eloc="21" lloc="9" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\library\AbstractAmcReport.php" cloc="25" eloc="158" lloc="102" loc="208" ncloc="183"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\library\AmcPatient.php" cloc="7" eloc="4" lloc="0" loc="13" ncloc="6"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\library\AmcPopulation.php" cloc="16" eloc="21" lloc="10" loc="39" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\library\AmcResult.php" cloc="19" eloc="31" lloc="17" loc="49" ncloc="30"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302c.php" cloc="7" eloc="20" lloc="8" loc="34" ncloc="27"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302c\Denominator.php" cloc="13" eloc="18" lloc="7" loc="34" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302c\Numerator.php" cloc="10" eloc="19" lloc="8" loc="33" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302d.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302d\Denominator.php" cloc="13" eloc="18" lloc="7" loc="34" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302d\Numerator.php" cloc="13" eloc="19" lloc="8" loc="36" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302e.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302e\Denominator.php" cloc="9" eloc="18" lloc="7" loc="30" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302e\Numerator.php" cloc="10" eloc="19" lloc="8" loc="33" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302f.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302f\Denominator.php" cloc="10" eloc="18" lloc="7" loc="31" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302f\Numerator.php" cloc="9" eloc="22" lloc="6" loc="35" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302g.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302g\Denominator.php" cloc="14" eloc="19" lloc="7" loc="37" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302g\Numerator.php" cloc="8" eloc="17" lloc="6" loc="29" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302h.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302h\Denominator.php" cloc="12" eloc="12" lloc="4" loc="28" ncloc="16"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302h\Numerator.php" cloc="8" eloc="12" lloc="4" loc="24" ncloc="16"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302j.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302j\Denominator.php" cloc="13" eloc="12" lloc="4" loc="29" ncloc="16"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302j\Numerator.php" cloc="9" eloc="17" lloc="6" loc="30" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302m.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302m\Denominator.php" cloc="14" eloc="18" lloc="7" loc="36" ncloc="22"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_302m\Numerator.php" cloc="9" eloc="24" lloc="7" loc="39" ncloc="30"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304a.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304a\Denominator.php" cloc="12" eloc="20" lloc="8" loc="35" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304a\Numerator.php" cloc="8" eloc="19" lloc="7" loc="31" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304b.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304b\Denominator.php" cloc="13" eloc="12" lloc="4" loc="29" ncloc="16"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304b\Numerator.php" cloc="9" eloc="18" lloc="7" loc="31" ncloc="22"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304c.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304c\Denominator.php" cloc="10" eloc="18" lloc="7" loc="31" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304c\Numerator.php" cloc="9" eloc="22" lloc="6" loc="35" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304d.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304d\Denominator.php" cloc="9" eloc="18" lloc="6" loc="30" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304d\Numerator.php" cloc="8" eloc="18" lloc="7" loc="30" ncloc="22"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304f.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304f\Denominator.php" cloc="16" eloc="20" lloc="8" loc="40" ncloc="24"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304f\Numerator.php" cloc="11" eloc="22" lloc="11" loc="43" ncloc="32"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304g.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304g\Denominator.php" cloc="10" eloc="18" lloc="7" loc="31" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304g\Numerator.php" cloc="9" eloc="20" lloc="7" loc="33" ncloc="24"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304h.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304h\Denominator.php" cloc="13" eloc="12" lloc="4" loc="29" ncloc="16"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304h\Numerator.php" cloc="8" eloc="20" lloc="10" loc="33" ncloc="25"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304i.php" cloc="7" eloc="20" lloc="8" loc="33" ncloc="26"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304i\Denominator.php" cloc="13" eloc="12" lloc="4" loc="29" ncloc="16"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Amc\reports\AMC_304i\Numerator.php" cloc="9" eloc="18" lloc="7" loc="31" ncloc="22"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\CqmReportFactory.php" cloc="7" eloc="23" lloc="11" loc="34" ncloc="27"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\library\AbstractCqmReport.php" cloc="12" eloc="128" lloc="84" loc="161" ncloc="149"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\library\CqmPatient.php" cloc="7" eloc="4" lloc="0" loc="13" ncloc="6"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\library\CqmPopulation.php" cloc="16" eloc="21" lloc="10" loc="39" ncloc="23"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\library\CqmResult.php" cloc="13" eloc="52" lloc="28" loc="65" ncloc="52"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\library\NFQ_Unimplemented.php" cloc="7" eloc="12" lloc="5" loc="21" ncloc="14"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0013.php" cloc="7" eloc="8" lloc="2" loc="16" ncloc="9"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0013\InitialPatientPopulation.php" cloc="7" eloc="19" lloc="7" loc="29" ncloc="22"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0013\Numerator.php" cloc="8" eloc="29" lloc="9" loc="40" ncloc="32"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0013\PopulationCriteria.php" cloc="7" eloc="24" lloc="10" loc="36" ncloc="29"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024.php" cloc="7" eloc="12" lloc="6" loc="20" ncloc="13"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\Denominator.php" cloc="7" eloc="17" lloc="7" loc="27" ncloc="20"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\InitialPatientPopulation1.php" cloc="8" eloc="17" lloc="7" loc="28" ncloc="20"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\InitialPatientPopulation2.php" cloc="8" eloc="17" lloc="7" loc="28" ncloc="20"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\InitialPatientPopulation3.php" cloc="8" eloc="17" lloc="7" loc="28" ncloc="20"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\Numerator1.php" cloc="7" eloc="14" lloc="6" loc="24" ncloc="17"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\Numerator2.php" cloc="10" eloc="17" lloc="7" loc="31" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\Numerator3.php" cloc="10" eloc="17" lloc="7" loc="31" ncloc="21"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\PopulationCriteria1.php" cloc="7" eloc="28" lloc="14" loc="40" ncloc="33"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\PopulationCriteria2.php" cloc="7" eloc="28" lloc="14" loc="40" ncloc="33"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0024\PopulationCriteria3.php" cloc="7" eloc="28" lloc="14" loc="40" ncloc="33"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028a.php" cloc="7" eloc="8" lloc="2" loc="16" ncloc="9"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028a\InitialPatientPopulation.php" cloc="7" eloc="26" lloc="8" loc="37" ncloc="30"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028a\Numerator.php" cloc="10" eloc="38" lloc="14" loc="52" ncloc="42"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028a\PopulationCriteria.php" cloc="7" eloc="24" lloc="10" loc="36" ncloc="29"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028b.php" cloc="7" eloc="8" lloc="2" loc="16" ncloc="9"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028b\Denominator.php" cloc="13" eloc="46" lloc="20" loc="65" ncloc="52"/>

<file name="C:\wamp\www\kia\library\classes\rulesets\Cqm\reports\NFQ_0028b\InitialPatientPopulation.php" cloc="7" eloc="26" lloc="8" loc="37" ncloc="30"/>

B2. PHP_Depend – XML Package dependencies

In this section of the appendix there are included the first 500 lines of the *classes.xml* file that was generated by PHP_Depend while analyzing the source code of OpenEMR. In this file we have the package dependencies between classes.


```
<?xml version="1.0" encoding="UTF-8"?>
<PDepend>
 <Packages>
  <Package name="+global">
   <Stats>
    <TotalClasses>958</TotalClasses>
    <ConcreteClasses>940</ConcreteClasses>
    <AbstractClasses>18</AbstractClasses>
    <Ca>12</Ca>
    <Ce>14</Ce>
    <A>0.018789144050104</A>
    <I>0.53846153846154</I>
    <D>0.44274931748836</D>
   </Stats>
   <ConcreteClasses>
    <Class sourceFile="C:\wamp\www\kia\Tests\BaseHarness.class.php">BaseHarness</Class>
    <Class sourceFile="C:\wamp\www\kia\Tests\FormattingTest.php">FormattingTest</Class>
    <Class sourceFile="C:\wamp\www\kia\Tests\InstallerTest.php">InstallerTest</Class>
    <Class sourceFile="C:\wamp\www\kia\Tests\NumberToTextTest.php">NumberToTextTest</Class>
    <Class sourceFile="C:\wamp\www\kia\Tests\OptionsTest.php">OptionsTest</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\activity_impact\C_FormActivityImpact.class.php">C_FormActivityImpact</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\activity_impact\FormActivityImpact.class.php">FormActivityImpact</Class>
    <Class sourcFile="C:\wamp\www\kia\contrib\forms\additional_studies\C_FormAdditionalStudies.class.php">C_FormAdditionalStudies</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\additional_studies\FormAdditionalStudies.class.php">FormAdditionalStudies</Class>
    <Class sourc-
File="C:\wamp\www\kia\contrib\forms\adult_progress_note\C_FormAdultProgressNote.class.php">C_FormAdultProgressNote</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\adult_progress_note\FormAdultProgressNote.class.php">FormAdultProgressNote</Class>
    <Class sourc-
File="C:\wamp\www\kia\contrib\forms\approved_physical\C_FormApprovedPhysical.class.php">C_FormApprovedPhysical</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\approved_physical\FormApprovedPhysical.class.php">FormApprovedPhysical</Class>
    <Class sourcFile="C:\wamp\www\kia\contrib\forms\complaint_history\C_FormComplaintHistory.class.php">C_FormComplaintHistory</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\complaint_history\FormComplaintHistory.class.php">FormComplaintHistory</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\evaluation\C_FormEvaluation.class.php">C_FormEvaluation</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\evaluation\FormEvaluation.class.php">FormEvaluation</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\hand\C_FormHand.class.php">C_FormHand</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\hand\FormHand.class.php">FormHand</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\hp_tje_primary\C_FormHpTje.class.php">C_FormHpTje</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\hp_tje_primary\FormHpTjePrimary.class.php">FormHpTjePrimary</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\hpi\C_FormHPI.class.php">C_FormHPI</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\hpi\FormHPI.class.php">FormHPI</Class>
    <Class sourceFile="C:\wamp\www\kia\contrib\forms\leg_length\C_FormLegLength.class.php">C_FormLegLength</Class>
```

<Class sourceFile="C:\wamp\www\kia\contrib\forms\leg_length\FormLegLength.class.php">FormLegLength</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\md_assessment\C_FormMDAssessment.class.php">C_FormMDAssessment</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\md_assessment\FormMDAssessment.class.php">FormMDAssessment</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\medical_orders\C_FormMedicalOrders.class.php">C_FormMedicalOrders</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\medical_orders\FormMedicalOrders.class.php">FormMedicalOrders</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\nursing_notes\C_FormNursingNotes.class.php">C_FormNursingNotes</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\nursing_notes\FormNursingNotes.class.php">FormNursingNotes</Class>

<Class sourcFile="C:\wamp\www\kia\contrib\forms\patient_instruction\C_FormPatientInstruction.class.php">C_FormPatientInstruction</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\patient_instruction\FormPatientInstruction.class.php">FormPatientInstruction</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\pfsh\C_FormPFSH.class.php">C_FormPFSH</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\pfsh\FormPFSH.class.php">FormPFSH</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\prior_auth\C_FormPriorAuth.class.php">C_FormPriorAuth</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\prior_auth\FormPriorAuth.class.php">FormPriorAuth</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\prosthesis\C_FormProsthesis.class.php">C_FormProsthesis</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\prosthesis\FormProsthesis.class.php">FormProsthesis</Class>

<Class sourc-
File="C:\wamp\www\kia\contrib\forms\review_of_systems\C_FormReviewOfSystems.class.php">C_FormReviewOfSystems</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\review_of_systems\FormReviewOfSystems.class.php">FormReviewOfSystems</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\rom\C_FormROM.class.php">C_FormROM</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\rom\FormROM.class.php">FormROM</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\ros2\C_FormROS2.class.php">C_FormROS2</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\ros2\FormROS2.class.php">FormROS2</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\snellen\C_FormSnellen.class.php">C_FormSnellen</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\snellen\FormSnellen.class.php">FormSnellen</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\soap2\C_FormSOAP.class.php">C_FormSOAP</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\soap2\FormSOAP.class.php">FormSOAP</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\well_child\C_FormWellChild.class.php">C_FormWellChild</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\well_child\FormWellChild.class.php">FormWellChild</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\well_child_care\C_WellChildCare.class.php">C_WellChildCare</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\well_infant\C_FormWellInfant.class.php">C_FormWellInfant</Class>

<Class sourceFile="C:\wamp\www\kia\contrib\forms\well_infant\FormWellInfant.class.php">FormWellInfant</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_BillingContact.class.php">C_InsuranceCompany</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_Document.class.php">C_Document</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_DocumentCategory.class.php">C_DocumentCategory</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_Hl7.class.php">C_Hl7</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_InsuranceCompany.class.php">C_InsuranceCompany</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_InsuranceNumbers.class.php">C_InsuranceNumbers</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_PatientFinder.class.php">C_PatientFinder</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_Pharmacy.class.php">C_Pharmacy</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_PracticeSettings.class.php">C_PracticeSettings</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_Prescription.class.php">C_Prescription</Class>

<Class sourceFile="C:\wamp\www\kia\controllers\C_X12Partner.class.php">C_X12Partner</Class>

<Class sourceFile="C:\wamp\www\kia\custom\BillingExport.csv.php">BillingExport</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\Cache_Lite\Hashed_Cache_Lite.php">Hashed_Cache_Lite</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-active-record.inc.php">ADODB_Active_DB</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-active-record.inc.php">ADODB_Active_Table</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-active-record.inc.php">ADODB_Active_Record</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-datadict.inc.php">ADODB_DataDict</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-exceptions.inc.php">ADODB_Exception</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-iterator.inc.php">ADODB_Iterator</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-iterator.inc.php">ADODB_BASE_RS</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-pager.inc.php">ADODB_Pager</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-pear.inc.php">DB</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-perf.inc.php">adodb_perf</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb-php4.inc.php">ADODB_BASE_RS</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb.inc.php">ADOFieldObject</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb.inc.php">ADOConnection</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb.inc.php">ADOFetchObj</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb.inc.php">ADORecordSet_empty</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb.inc.php">ADORecordSet</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\adodb.inc.php">ADORecordSet_array</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-access.inc.php">ADODB2_access</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-db2.inc.php">ADODB2_db2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-firebird.inc.php">ADODB2_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-generic.inc.php">ADODB2_generic</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-ibase.inc.php">ADODB2_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-informix.inc.php">ADODB2_informix</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-mssql.inc.php">ADODB2_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-mysql.inc.php">ADODB2_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-oci8.inc.php">ADODB2_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-postgres.inc.php">ADODB2_postgres</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-sapdb.inc.php">ADODB2_sapdb</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\datadict\datadict-sybase.inc.php">ADODB2_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-access.inc.php">ADODB_access</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-access.inc.php">ADORecordSet_access</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado.inc.php">ADODB_ado</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado.inc.php">ADORecordSet_ado</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado5.inc.php">ADODB_ado</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado5.inc.php">ADORecordSet_ado</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado_access.inc.php">ADODB_ado_access</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado_access.inc.php">ADORecordSet_ado_access</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado_mssql.inc.php">ADODB_ado_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ado_mssql.inc.php">ADORecordSet_ado_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-borland_ibase.inc.php">ADODB_borland_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-borland_ibase.inc.php">ADORecordSet_borland_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-csv.inc.php">ADODB_csv</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-csv.inc.php">ADORecordset_csv</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-db2.inc.php">ADODB_db2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-db2.inc.php">ADORecordSet_db2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-fbsql.inc.php">ADODB_fbsql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-fbsql.inc.php">ADORecordSet_fbsql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-firebird.inc.php">ADODB_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-firebird.inc.php">ADORecordSet_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ibase.inc.php">ADODB_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ibase.inc.php">ADORecordset_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-informix.inc.php">ADODB_informix</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-informix.inc.php">ADORecordset_informix</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-informix72.inc.php">ADODB_informix72</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-informix72.inc.php">ADORecordset_informix72</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ldap.inc.php">ADODB_ldap</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-ldap.inc.php">ADORecordSet_ldap</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssql.inc.php">ADODB_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssql.inc.php">ADORecordset_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssql.inc.php">ADORecordSet_array_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssqlpo.inc.php">ADODB_mssqlpo</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mssqlpo.inc.php">ADORecordset_mssqlpo</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysql.inc.php">ADODB_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysql.inc.php">ADORecordSet_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysql.inc.php">ADORecordSet_ext_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqli.inc.php">ADODB_mysqli</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqli.inc.php">ADORecordSet_mysqli</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqlt.inc.php">ADODB_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqlt.inc.php">ADORecordSet_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-mysqlt.inc.php">ADORecordSet_ext_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-netezza.inc.php">ADODB_netezza</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-netezza.inc.php">ADORecordSet_netezza</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8.inc.php">ADODB_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8.inc.php">ADORecordset_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8.inc.php">ADORecordSet_ext_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci805.inc.php">ADODB_oci805</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci805.inc.php">ADORecordset_oci805</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8po.inc.php">ADODB_oci8po</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oci8po.inc.php">ADORecordset_oci8po</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc.inc.php">ADODB_odbc</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc.inc.php">ADORecordSet_odbc</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_db2.inc.php">ADODB_ODBC_DB2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_db2.inc.php">ADORecordSet_odbc_db2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_mssql.inc.php">ADODB_odbc_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_mssql.inc.php">ADORecordSet_odbc_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_oracle.inc.php">ADODB_odbc_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbc_oracle.inc.php">ADORecordSet_odbc_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADODB_odbtp</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADORecordSet_odbtp</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADORecordSet_odbtp_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADORecordSet_odbtp_access</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADORecordSet_odbtp_vfp</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADORecordSet_odbtp_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp.inc.php">ADORecordSet_odbtp_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-odbtp_unicode.inc.php">ADODB_odbtp_unicode</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oracle.inc.php">ADODB_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-oracle.inc.php">ADORecordset_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo.inc.php">ADODB_pdo_base</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo.inc.php">ADODB_pdo</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo.inc.php">ADOPDOStatement</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo.inc.php">ADORecordSet_pdo</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_mssql.inc.php">ADODB_pdo_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_mysql.inc.php">ADODB_pdo_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_oci.inc.php">ADODB_pdo_oci</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-pdo_pgsql.inc.php">ADODB_pdo_pgsql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres64.inc.php">ADODB_postgres64</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres64.inc.php">ADORecordSet_postgres64</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres7.inc.php">ADODB_postgres7</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres7.inc.php">ADORecordSet_postgres7</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-postgres7.inc.php">ADORecordSet_assoc_postgres7</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-proxy.inc.php">ADODB_proxy</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-proxy.inc.php">ADORecordset_proxy</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sapdb.inc.php">ADODB_SAPDB</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sapdb.inc.php">ADORecordSet_sapdb</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlanywhere.inc.php">ADODB_sqlanywhere</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlanywhere.inc.php">ADORecordSet_sqlanywhere</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlite.inc.php">ADODB_sqlite</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlite.inc.php">ADORecordset_sqlite</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlitepo.inc.php">ADODB_sqlitepo</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sqlitepo.inc.php">ADORecordset_sqlitepo</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase.inc.php">ADODB_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase.inc.php">ADORecordset_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase.inc.php">ADORecordSet_array_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase_ase.inc.php">ADODB_sybase_ase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-sybase_ase.inc.php">adorecordset_sybase_ase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-vfp.inc.php">ADODB_vfp</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\drivers\adodb-vfp.inc.php">ADORecordSet_vfp</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\perf\perf-db2.inc.php">perf_db2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\perf\perf-informix.inc.php">perf_informix</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\perf\perf-mssql.inc.php">perf_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\perf\perf-mysql.inc.php">perf_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\perf\perf-oci8.inc.php">perf_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\perf\perf-postgres.inc.php">perf_postgres</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-compress-bzip2.php">ADODB_Compress_Bzip2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-compress-gzip.php">ADODB_Compress_Gzip</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-mcrypt.php">ADODB_Encrypt_MCrypt</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-md5.php">ADODB_Encrypt_MD5</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-secret.php">ADODB_Encrypt_Secret</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-encrypt-sha1.php">ADODB_Encrypt_SHA1</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-session.php">ADODB_Session</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\adodb-session2.php">ADODB_Session</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\crypt.inc.php">MD5Crypt</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\adodb\session\crypt.inc.php">SHA1Crypt</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">nusoap_base</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">soap_fault</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">XMLSchema</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">soapval</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">soap_transport_http</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">soap_server</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">wsdl</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">soap_parser</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\soap\nusoap.php">nusoap_client</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\acl_tests.php">acl_setup</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\acl_tests.php">acl_test</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">Exception</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">Assert</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">TestCase</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">TestSuite</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">TestFailure</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">TestResult</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">TextTestResult</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">PrettyTestResult</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit.php">TestRunner</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">SelfTestResult</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">TestFixture</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">Fixture2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">TestPass2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">MoreTesterTests</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">ManyFailingTests</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">DummyClass1</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">DummyClass2</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">AssertEqualsTests</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">AssertEqualsPhp3ErrorTests</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">AssertEqualsTests4</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\phpunit\phpunit_test.php">TestClassNameStartingWithTest</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\run.php">gacl_test_result</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\run.php">gacl_test_case</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\run.php">gacl_test_suite</Class>

<Class sourceFile="C:\wamp\www\kia\gacl\test_suite\unit_tests.php">phpgacl_api_test</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\fee_sheet\review\fee_sheet_classes.php">code_info</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\fee_sheet\review\fee_sheet_classes.php">procedure</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\fee_sheet\review\fee_sheet_classes.php">encounter_info</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\fee_sheet\review\fee_sheet_options_queries.php">fee_sheet_option</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\painmap\C_FormPainMap.class.php">C_FormPainMap</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\painmap\FormPainMap.php">FormPainMap</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\prior_auth\C_FormPriorAuth.class.php">C_FormPriorAuth</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\prior_auth\FormPriorAuth.class.php">FormPriorAuth</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\ros\C_FormROS.class.php">C_FormROS</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\ros\FormROS.class.php">FormROS</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\soap\C_FormSOAP.class.php">C_FormSOAP</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\soap\FormSOAP.class.php">FormSOAP</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\vitalsM\C_FormVitalsM.class.php">C_FormVitalsM</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\vitalsM\FormVitalsM.class.php">FormVitalsM</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\vitals\C_FormVitals.class.php">C_FormVitals</Class>

<Class sourceFile="C:\wamp\www\kia\interface\forms\vitals\FormVitals.class.php">FormVitals</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pcSmarty.class.php">pcSmarty</Class>

<Class source-
File="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Benchmark\Timer.php">Benchmark_Timer</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Date\Calc.php">Date_Calc</Class>

<Class source-
File="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Smarty\Config_File.class.php">Config_File</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Smarty\Smarty.class.php">Smarty</Class>

<Class source-
File="C:\wamp\www\kia\interface\main\calendar\modules\PostCalendar\pnincludes\Smarty\Smarty_Compiler.class.php">Smarty_Compiler</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb-datadict.inc.php">ADODB_DataDict</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb-pager.inc.php">ADODB_Pager</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb-pear.inc.php">DB</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php">ADOFieldObject</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php">ADOConnection</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php">ADOFetchObj</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php">ADORecordSet_empty</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php">ADORecordSet</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\adodb.inc.php">ADORecordSet_array</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\crypt.inc.php">MD5Crypt</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-access.inc.php">ADODB2_access</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-db2.inc.php">ADODB2_db2</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-generic.inc.php">ADODB2_generic</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-ibase.inc.php">ADODB2_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-informix.inc.php">ADODB2_informix</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-mssql.inc.php">ADODB2_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-mysql.inc.php">ADODB2_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-oci8.inc.php">ADODB2_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\datadict\datadict-postgres.inc.php">ADODB2_postgres</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-access.inc.php">ADODB_access</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-access.inc.php">ADORecordSet_access</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado.inc.php">ADODB_ado</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado.inc.php">ADORecordSet_ado</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado_access.inc.php">ADODB_ado_access</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-
ado_access.inc.php">ADORecordSet_ado_access</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado_mssql.inc.php">ADODB_ado_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ado_mssql.inc.php">ADORecordSet_ado_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-borland_ibase.inc.php">ADODB_borland_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-borland_ibase.inc.php">ADORecordSet_borland_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-csv.inc.php">ADODB_csv</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-csv.inc.php">ADORecordset_csv</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-db2.inc.php">ADODB_DB2</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-db2.inc.php">ADORecordSet_db2</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-fbsql.inc.php">ADODB_fbsql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-fbsql.inc.php">ADORecordSet_fbsql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-firebird.inc.php">ADODB_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-firebird.inc.php">ADORecordSet_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ibase.inc.php">ADODB_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-ibase.inc.php">ADORecordset_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-informix.inc.php">ADODB_informix</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-informix.inc.php">ADORecordset_informix</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-informix72.inc.php">ADODB_informix72</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-informix72.inc.php">ADORecordset_informix72</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssql.inc.php">ADODB_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssql.inc.php">ADORecordset_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssql.inc.php">ADORecordSet_array_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssqlpo.inc.php">ADODB_mssqlpo</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mssqlpo.inc.php">ADORecordset_mssqlpo</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mysql.inc.php">ADODB_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mysql.inc.php">ADORecordSet_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mysqlt.inc.php">ADODB_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-mysqlt.inc.php">ADORecordSet_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci8.inc.php">ADODB_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci8.inc.php">ADORecordset_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci805.inc.php">ADODB_oci805</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci805.inc.php">ADORecordset_oci805</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci8po.inc.php">ADODB_oci8po</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oci8po.inc.php">ADORecordset_oci8po</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc.inc.php">ADODB_odbc</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc.inc.php">ADORecordSet_odbc</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc_mssql.inc.php">ADODB_odbc_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc_mssql.inc.php">ADORecordSet_odbc_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc_oracle.inc.php">ADODB_odbc_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-odbc_oracle.inc.php">ADORecordSet_odbc_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oracle.inc.php">ADODB_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-oracle.inc.php">ADORecordset_oracle</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-postgres64.inc.php">ADODB_postgres64</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-postgres64.inc.php">ADORecordSet_postgres64</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-postgres7.inc.php">ADODB_postgres7</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-postgres7.inc.php">ADORecordSet_postgres7</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-proxy.inc.php">ADODB_proxy</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-proxy.inc.php">ADORecordset_proxy</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sqlanywhere.inc.php">ADODB_sqlanywhere</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sqlanywhere.inc.php">ADORecordSet_sqlanywhere</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sybase.inc.php">ADODB_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sybase.inc.php">ADORecordset_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-sybase.inc.php">ADORecordSet_array_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-vfp.inc.php">ADODB_vfp</Class>

<Class sourceFile="C:\wamp\www\kia\interface\main\calendar\pnadodb\drivers\adodb-vfp.inc.php">ADORecordSet_vfp</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\base\library\ActionRouter.php">ActionRouter</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\base\library\ControllerRouter.php">ControllerRouter</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\controllers\add\controller.php">Controller_add</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\controllers\alerts\controller.php">Controller_alerts</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\controllers\browse\controller.php">Controller_browse</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\controllers\detail\controller.php">Controller_detail</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\controllers\edit\controller.php">Controller_edit</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\CdrAlertManager.class.php">CdrAlertManager</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\CdrHelper.class.php">CdrResults</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\Code.php">Code</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\CodeManager.php">CodeManager</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\Option.php">Option</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervalDetail.php">ReminderIntervalDetail</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervalRange.php">ReminderIntervalRange</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervalType.php">ReminderIntervalType</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\ReminderIntervals.php">ReminderIntervals</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\Rule.php">Rule</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleAction.php">RuleAction</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleActions.php">RuleActions</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaAge.php">RuleCriteriaAge</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaAgeBuilder.php">RuleCriteriaAgeBuilder</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaAllergy.php">RuleCriteriaAllergy</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDatabaseBucket.php">RuleCriteriaDatabaseBucket</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDatabaseBuilder.php">RuleCriteriaDatabaseBuilder</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDatabaseCustom.php">RuleCriteriaDatabaseCustom</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDbView.php">RuleCriteriaDbView</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaDiagnosis.php">RuleCriteriaDiagnosis</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaFilterFactory.php">RuleCriteriaFilterFactory</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaLifestyle.php">RuleCriteriaLifestyle</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaListsBuilder.php">RuleCriteriaListsBuilder</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaMedicalIssue.php">RuleCriteriaMedicalIssue</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaMedication.php">RuleCriteriaMedication</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSex.php">RuleCriteriaSex</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSexBuilder.php">RuleCriteriaSexBuilder</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaSurgery.php">RuleCriteriaSurgery</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaTargetFactory.php">RuleCriteriaTargetFactory</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleCriteriaType.php">RuleCriteriaType</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleFilters.php">RuleFilters</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleManager.php">RuleManager</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleTargetActionGroup.php">RuleTargetActionGroup</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleTargets.php">RuleTargets</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\RuleType.php">RuleType</Class>

<Class sourceFile="C:\wamp\www\kia\interface\super\rules\library\TimeUnit.php">TimeUnit</Class>

<Class sourceFile="C:\wamp\www\kia\library\Claim.class.php">Claim</Class>

<Class sourceFile="C:\wamp\www\kia\library\adldap\adLDAP.php">adLDAP</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-active-record.inc.php">ADODB_Active_DB</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-active-record.inc.php">ADODB_Active_Table</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-active-record.inc.php">ADODB_Active_Record</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-active-recordx.inc.php">ADODB_Active_DB</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-active-recordx.inc.php">ADODB_Active_Table</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-active-recordx.inc.php">ADODB_Active_Record</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-datadict.inc.php">ADODB_DataDict</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-exceptions.inc.php">ADODB_Exception</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-memcache.lib.inc.php">ADODB_Cache_MemCache</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-pager.inc.php">ADODB_Pager</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-pear.inc.php">DB</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-perf.inc.php">adodb_perf</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb-php4.inc.php">ADODB_BASE_RS</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADOFieldObject</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADODB_Cache_File</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADOConnection</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADOFetchObj</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADODB_Iterator_empty</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADORecordSet_empty</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADODB_Iterator</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADORecordSet</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\adodb.inc.php">ADORecordSet_array</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-access.inc.php">ADODB2_access</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-db2.inc.php">ADODB2_db2</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-firebird.inc.php">ADODB2_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-generic.inc.php">ADODB2_generic</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-ibase.inc.php">ADODB2_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-informix.inc.php">ADODB2_informix</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-mssql.inc.php">ADODB2_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-mssqlnative.inc.php">ADODB2_mssqlnative</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-mysql.inc.php">ADODB2_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-oci8.inc.php">ADODB2_oci8</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-postgres.inc.php">ADODB2_postgres</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-sapdb.inc.php">ADODB2_sapdb</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-sqlite.inc.php">ADODB2_sqlite</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\datadict\datadict-sybase.inc.php">ADODB2_sybase</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-access.inc.php">ADODB_access</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-access.inc.php">ADORecordSet_access</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado.inc.php">ADODB_ado</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado.inc.php">ADORecordSet_ado</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado5.inc.php">ADODB_ado</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado5.inc.php">ADORecordSet_ado</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado_access.inc.php">ADODB_ado_access</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado_access.inc.php">ADORecordSet_ado_access</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado_mssql.inc.php">ADODB_ado_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ado_mssql.inc.php">ADORecordSet_ado_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ads.inc.php">ADODB_ads</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ads.inc.php">ADORecordSet_ads</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-borland_ibase.inc.php">ADODB_borland_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-borland_ibase.inc.php">ADORecordSet_borland_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-csv.inc.php">ADODB_csv</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-csv.inc.php">ADORecordset_csv</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-db2.inc.php">ADODB_db2</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-db2.inc.php">ADORecordSet_db2</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-db2oci.inc.php">ADODB_db2oci</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-db2oci.inc.php">ADORecordSet_db2oci</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-db2ora.inc.php">ADODB_db2oci</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-db2ora.inc.php">ADORecordSet_db2oci</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-fbsql.inc.php">ADODB_fbsql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-fbsql.inc.php">ADORecordSet_fbsql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-firebird.inc.php">ADODB_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-firebird.inc.php">ADORecordSet_firebird</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ibase.inc.php">ADODB_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ibase.inc.php">ADORecordset_ibase</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-informix.inc.php">ADODB_informix</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-informix.inc.php">ADORecordset_informix</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-informix72.inc.php">ADODB_informix72</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-informix72.inc.php">ADORecordset_informix72</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ldap.inc.php">ADODB_ldap</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-ldap.inc.php">ADORecordSet_ldap</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql.inc.php">ADODB_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql.inc.php">ADORecordset_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql.inc.php">ADORecordSet_array_mssql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql_n.inc.php">ADODB_mssql_n</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssql_n.inc.php">ADORecordset_mssql_n</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlnative.inc.php">ADODB_mssqlnative</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlnative.inc.php">ADORecordset_mssqlnative</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlnative.inc.php">ADORecordSet_array_mssqlnative</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlpo.inc.php">ADODB_mssqlpo</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mssqlpo.inc.php">ADORecordset_mssqlpo</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysql.inc.php">ADODB_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysql.inc.php">ADORecordSet_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysql.inc.php">ADORecordSet_ext_mysql</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqli.inc.php">ADODB_mysqli</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqli.inc.php">ADORecordSet_mysqli</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqli.inc.php">ADORecordSet_array_mysqli</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlpo.inc.php">ADODB_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlpo.inc.php">ADORecordSet_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlpo.inc.php">ADORecordSet_ext_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlt.inc.php">ADODB_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlt.inc.php">ADORecordSet_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-mysqlt.inc.php">ADORecordSet_ext_mysqlt</Class>

<Class sourceFile="C:\wamp\www\kia\library\adodb\drivers\adodb-netezza.inc.php">ADODB_netezza</Class>